

TasNetworks Threatened Bird Strategy 2022-2032

TasNetworks Threatened Bird Working Group

Version Number: Version 2.1

Date Approved: June 2022

Next review: July 2024

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Image: Trevor Rix

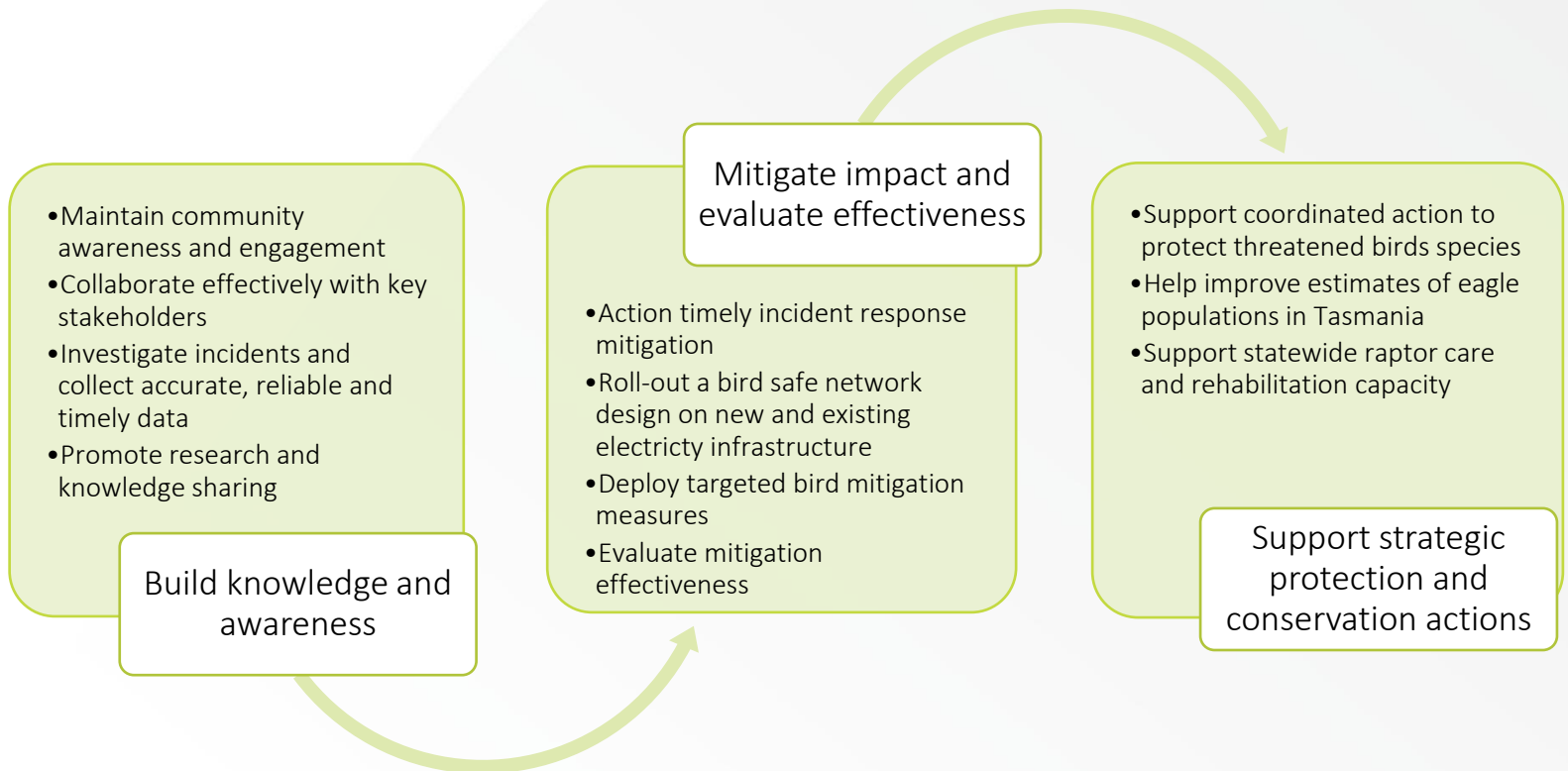
1 TasNetworks Threatened Bird Strategy overview

Our principles

- We encourage incident reporting and report our impact openly and transparently
- We take timely action to reduce the risk of future incidents
- We implement cost effective, risk-based measures to make our electricity infrastructure progressively safer for threatened birds
- We work collaboratively with all of our key stakeholders
- We support strategic protection and conservation actions which support long-term population viability

Aim: a sustained material reduction in impact on Tasmania's threatened birds

Our priorities 2022-2032



2 Strategy priorities and initiatives

2.1 Build knowledge and awareness

Maintaining ongoing team member and community awareness is a critical component of our Threatened Bird Strategy. Effective incident reporting enables us to better target bird mitigation measures on overhead electricity infrastructure and measure changes in our impact over time. Reporting also means we can take timely action to prevent repeat incidents and collect and analyse incident data to inform the prioritisation of sites as part of our targeted mitigation program. Collaborating and communicating effectively with key stakeholder will ensure there is continuing support for the Threatened Bird Strategy and alignment with ongoing research and conservation work.

Outcomes	Program/Initiative	Objectives by 2032
<ul style="list-style-type: none"> Maintain community awareness and engagement Collaborate and engage effectively with internal and external stakeholders Capture and report timely, accurate incident data Support research and knowledge creation 	<ul style="list-style-type: none"> TasNetworks external threatened bird communications program TasNetworks annual Threatened Bird Forum Threatened bird autopsies and specimen processing Routine training and awareness to TasNetworks team members Support bird of prey population assessments and research 	<ul style="list-style-type: none"> 50% TasNetworks customers know how to report threatened bird incidents 50% of customers aware of TasNetworks impact and response 95% birds impacted by the network provided for autopsy and processing 100% of incidents reported within one hour All applicable field team members aware of incident response requirements



2.2 Mitigate impact and evaluate effectiveness

Achieving the aim of TasNetworks Threatened Bird Strategy requires making our overhead electricity infrastructure intrinsically safer for threatened birds over time, resulting in an overall reduction in risk and incidents. Only then will a 'sustained' reduction in our impact be achieved. TasNetworks is committing to spending \$1m per annum on targeted bird mitigation over the next five years to help achieve this long-term aim. We are also investigating the use of alternative mitigation measures which may accelerate a reduction in risk posed by our electricity infrastructure.

Outcomes	Program/Initiative	Objectives by 2032
<ul style="list-style-type: none"> • Reduce reportable threatened bird incidents • Complete incident response mitigation for all incidents • Embed a bird safe overhead network design • Deploy targeted bird mitigation measures in very-high strike areas • Improve understanding of bird mitigation effectiveness • Minimise breeding and habitat disturbance • Include bird mitigation measures during the replacement and upgrade of existing infrastructure 	<ul style="list-style-type: none"> • Install incident response mitigation • Deploy targeted bird mitigation for threatened species • Evaluate mitigation effectiveness and alternative mitigation measures • Embed threatened bird nest management requirements • Refine eagle strike risk model • Ensure bird mitigation is adequately considered during work planning 	<ul style="list-style-type: none"> • 25% reduction in reportable incidents (ten year rolling incident average) • 90% of incident response mitigation completed within required timeframes • Minimum 10% of very-high risk network proactively mitigated • Minimum 10% of high-risk network opportunistically¹ mitigated • 99% of new and replacement network compliant with new design standard • Zero reportable incidents of breeding disturbance



¹ Opportunistic mitigation refers to the bird mitigation that will occur naturally as the network is progressively maintained, replaced and upgraded as per the new distribution design and construction standards

2.3 Support strategic protection and conservation actions

Despite a substantial increase in efforts to mitigate the risks posed by electricity infrastructure to Tasmanian threatened birds, a level of impact will persist for the foreseeable future. We will partner with organisations who lead positive, evidence-based conservation and protection efforts, including ongoing support for raptor care and rehabilitation, in acknowledgement of our impact. TasNetworks will also be a key voice at the table, engaging with and supporting, broader government-led efforts to manage threats to Tasmania's threatened bird life.

Outcomes	Program/Initiative	Objectives by 2032
<ul style="list-style-type: none"> Progress and support policies and actions which protect threatened birds species Support improved estimates of eagle population levels in Tasmania Enable statewide raptor care and rehabilitation capacity 	<ul style="list-style-type: none"> Undertake and support management actions as part of government led threatened species management plans Support state-wide raptor care and rehabilitation capacity Support work to improve estimates of eagle populations 	<ul style="list-style-type: none"> Substantively progress all agreed actions to protect threatened birds as part of any government led efforts



3 Executive summary

Tasmania, with its' areas of remote wilderness and iconic animal and plant species, engenders a strong sense of connection to place and nature. Arguably, no animal better symbolises our unique island identity than the awe inspiring wedge-tailed eagle soaring effortlessly over the rugged Tasmanian landscape.

Despite the care and connection that many Tasmanians feel towards of these iconic birds of prey, they are eking out a precarious existence in a landscape increasingly modified by humans. Development and land use change, combined with impacts from electrocution, persecution, lead, rodenticide as well as vehicle collision and wind-farm strikes, are jeopardising long-term population viability. Of these threats faced by threatened birds of prey, none have been better publicised than the ongoing issue of power line mortalities.

TasNetworks implemented its' first Threatened Bird Strategy in 2015-16 following an increase in the number of power line interactions reported in 2014-15. Since this time, significant progress has been made to build greater knowledge and awareness mitigate our impact and support protection and conservation work.

In particular, better incident data and ground-breaking research has supported an improved understanding of the key risk factors for eagle strikes. While the number of incidents has increased since 2015-16, this almost certainly reflects a significant improvement in community awareness, rather than a relative increase in total impact over this period.

Despite the step change in the level of business support, investment and understanding, the broader effects of power line mortalities on the viability of the wedge-tailed eagle population in Tasmania is still largely unknown. Incidents are not always detected due to the extent of TasNetworks electricity infrastructure, particularly in remote, inaccessible locations. Population size and rate of change is also not well understood meaning there is not yet enough evidence to draw firm conclusions about long-term changes in the number of reportable incidents.



Image: Thomas Webster

TasNetworks cares for the environment and is advocating for a sustainable future. The updated strategy identifies the high-level objectives and actions required over the next ten years for us to progress towards the long-term aim of the strategy and to support long-term species viability in Tasmania.

In support of this aim, TasNetworks will maintain the level of investment in targeted threatened bird mitigation over the next ten years with the aim of mitigating at least 1,500km of high-risk network in this period. This includes a minimum commitment of investing at least \$1m p.a. over the next five years.

Most importantly, it seeks to;

- maintain the urgency and collaborative effort required to make our network safer for threatened birds;
- ensure the business continues to invest in actions which are risk-based and strategically aligned with our long-term aim and;
- design out the risks of power line mortalities by adopting an inherently 'bird safe' network design.

While progress has been made, there's still significant work ahead before the aim of the strategy is realised. Ultimately, the success of the strategy depends on the collaboration, engagement and long-term commitment of TasNetworks, our key stakeholders and customers to help protect these majestic birds now, and into the future.



4 Strategy purpose and scope

Purpose

The Threatened Bird Strategy sets out TasNetworks high-level approach and priorities for reducing and minimising the impact of our overhead electricity infrastructure on Tasmanian threatened bird species over the next ten years. This is the second iteration of the strategy and it applies from the start of 2022 until the end of 2032. Specifically, it sets out the agreed aim, priorities, outcomes and objectives over the forward 10 year period. The strategy will be reviewed and updated every two years to ensure it remains fit-for-purpose.

Scope

To date, TasNetworks has prioritised the conservation and protection of threatened bird species. This is because;

- they are protected under both Commonwealth and State Government legislation;
- TasNetworks has agreed commitments with the Department of Natural Resources and Environment Tasmania as part of a Public Authority Management Agreement (PAMA) to minimise the impacts of TasNetworks owned electricity infrastructure;
- they are at an elevated risk of extinction due to a range of human and non-human threats;
- they are considered key stone species, critical for maintaining ecosystem function and biodiversity;
- our shareholder, customers, board, regulators and key stakeholders have set clear expectations that they expect us to address our impact on these species and;
- It's the right thing to do, consistent with our Environment and Sustainability Policy, Corporate Social Responsibility Strategy and United Nations Sustainable Development Goals (SDGs).

This strategy sets out, at a high-level, how these commitments will be met, and how we will support broader government efforts to prevent the decline of species listed under the *Threatened Species Protection Act 1995 (TSP)* and *Biodiversity Protection and Conservation act 1999 (EPBC)*.

However, in responding to and minimising TasNetworks environmental impacts, implications for other business risks, including safety and reliability of supply for our Tasmanian electricity customers, must also be considered. While we'll continue to take a strategic and risk-based approach which focusses on listed threatened species, we will also continue to monitor and evaluate incidents involving other animal species and seek expert advice and feedback, to determine if we need to recalibrate TasNetworks strategic, risk-based approach in future.

The strategy is also underpinned by a range of more prescriptive internal documents which set out TasNetworks specific business requirements for responding to and reporting incidents, mitigating new and existing assets and managing potential breeding disturbance of threatened bird species. These are listed at the rear of the document.

5 Which species are impacted by electricity infrastructure?

The threatened species most impacted by TasNetworks electricity infrastructure are highlighted below. However, a number of other listed and non-listed species have been impacted such as shy albatross, masked owls, swans, magpies and brown falcons. Customers can report wildlife they suspect has been impacted by our infrastructure via the TasNetworks website or by calling 132 004.

Image: Dean Hohn



The Tasmanian wedge-tailed eagle (*aquila audax fleayi*) is a subspecies of the mainland wedge-tailed eagle and only occurs in Tasmania. It is Australia's largest bird of prey and can be identified by its wedge-shaped tail. They are currently listed as endangered under both the TSP and the EPBC.

Image: David Waters



In Tasmania, the grey goshawk (*accipiter novaehollandiae*) is a large, pure white raptor, which is visibility distinct from the mainland variety (grey morph). Females are almost twice as heavy as males. The species nests in mature wet forest, usually in the vicinity of a watercourse. They are currently listed as endangered under the TSP.

Image: Thomas Webster



The white-bellied Sea-Eagle, (*Haliaeetus leucogaster*), is a large, mostly white bird of prey with broad greyish wings and a short pale wedge-shaped tail. Sub-adults are speckled slaty brown and can be confused with wedge-tailed eagles. They are currently listed as vulnerable under the TSP.

6 A brief history: threatened birds and power line mortalities

Bird mortalities, caused by overhead power lines, is a long-standing global environmental issue. It is estimated that up to one billion birds are killed by electricity infrastructure worldwide per year². While the issue has long been recognized in Tasmania, the level and focus has ebbed and flowed over time, largely in response to the level of wider community interest.

In 1994 a world-leading, strategic partnership was formed between the Endangered Wildlife Trust and Eskom (the electricity service provider in the Republic of South Africa) to deal with animal interactions with electricity infrastructure including bird mortalities. In 1996, a similar model of cooperative association was established in Tasmania between the Hydro Electric Commission (HEC), the Parks and Wildlife Service (PWS) and the Australasian Raptor Association. The aim of the collaborative effort was to decrease injuries and mortalities of threatened birds from HEC electricity infrastructure (now owned and operated by TasNetworks) called the Bird Mortality Project.

A project officer was employed with HEC and PWS funds, the position operating within the HEC for a year. The project detailed a process to mitigate hazardous pole top configurations from causing death to threatened and non-threatened bird species alike. In 2002, Aurora Energy won the Environmental Ministers Award for its bird mitigation measures. However, at this time very few threatened bird electrocutions were being reported and broader community interest remained low.

From February 2005 to early April 2005, nine wedge-tailed eagle carcasses were found on or near steel lattice towers at Jericho. These discoveries lead to the development of Aurora's Strategy for managing the risk of harm to threatened species from interaction with power distribution assets. This strategy emphasised the importance of mitigating certain higher risk asset types, steel lattice distribution towers in particular.

Since that time the majority of steel lattice towers have been mitigated and very few of the reported deaths of recent years have been attributed to these types of towers, demonstrating the effectiveness of mitigation efforts. These incidents also led to the creation of a Public Authority Management Agreement (PAMA) between TasNetworks (formerly Aurora) and The Department of Natural Resources and Environment Tasmania (formerly DPIPWE) in 2007 which formalised a number of actions to address and reduce mortalities of listed threatened bird species under the TSP.

² Hunting, K. 2002. A roadmap for PIER research on avian collisions with power lines in California. Technical report P500-02-071F. California Energy Commission, Public Interest Energy Research (PIER) Program, Sacramento.

In 2014-15, following the creation of TasNetworks as an integrated network business, seven endangered Tasmanian wedge-tailed eagles, two endangered grey goshawks and one vulnerable white bellied sea eagle were reported as killed by TasNetworks electrical infrastructure. This represented the highest number of reported deaths in a financial year to date. A renewed increase in both business and community concerns, spurred the development of the first TasNetworks Threatened Bird Strategy (2016-2021).

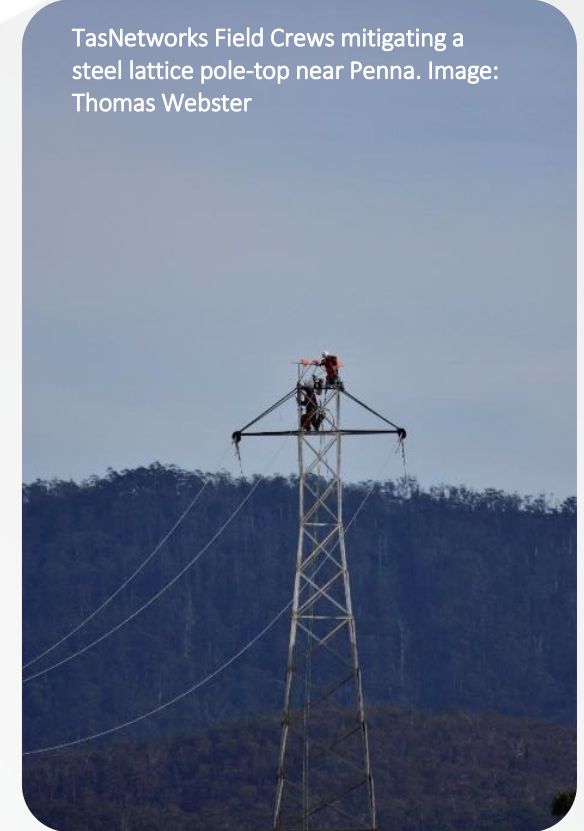
The strategy helped to establish a formal internal TasNetworks Threatened Bird Working Group (TBWG) with clear accountabilities and responsibilities for delivering on key actions and initiatives. Since its creation, the TBWG, with the support and guidance from numerous external stakeholders, has made a number of significant achievements including:

- implementing a targeted threatened bird mitigation program with a total spend of \$3.8m over four years
- developing an eagle strike risk model which is now accessible to TasNetworks employees as a graphic information system (GIS) layer when designing new assets
- creating an incident response policy which requires mitigation to be installed at the incident site, usually within 7 days
- Developing clear design requirements for bird mitigation to be included during the construction, replacement and maintenance of electricity infrastructure
- the development and implementation of a community engagement and communications plan to raise and maintain awareness community awareness and;
- supporting increased capacity for raptor care and rehabilitation, particularly in southern Tasmania.

During this period the number of power line mortalities recorded over this period has also increased. While the data looks concerning, it's likely that higher numbers of reported incidents largely reflects the improved reporting from TasNetworks field crews and the public, rather than a material change in the level of impact occurring. In fact, an improvement in reporting means better data to inform strategic investment and mitigation in high-risk areas, as well as plans to improve the way we design and build our network.

While much has been achieved to date, the long journey towards an electricity network which is inherently safer for all birds is only just beginning...

TasNetworks Field Crews mitigating a steel lattice pole-top near Penna. Image: Thomas Webster



7 Why is managing our impact on threatened birds important?



Managing business risks

TasNetworks impact on listed threatened species is one of the businesses most significant environmental, reputational and compliance risks. These risks need to be managed in line with business, regulator and community expectations.



Powering a bright future

Maintaining biodiversity and ecosystem function

Birds of prey are apex predators, critical for maintaining ecosystem function and health. They help to maintain the population levels of other species within sustainable levels (particularly invasive species)

Meeting our social responsibilities

Protecting our iconic threatened bird species is the right thing to do and intrinsically linked to our purpose of 'powering a bright future'



7.1 Corporate social responsibility at TasNetworks

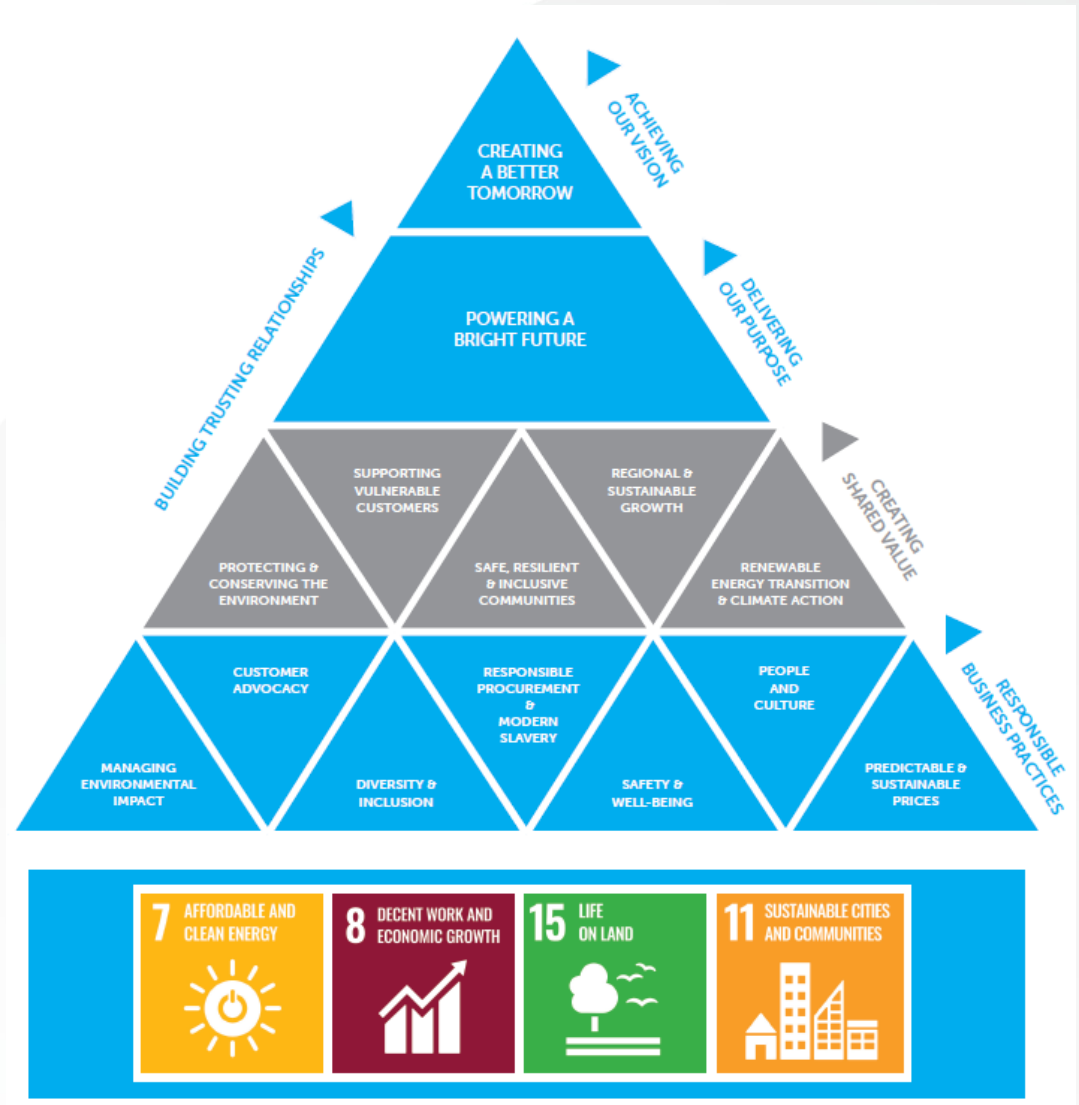
TasNetworks provides an essential service to all Tasmanians, underpinning continued social and economic prosperity. Simultaneously, we are working hard to enable the transition to a reliable, low cost, low-emissions future by integrating new renewables into the National Electricity Market (NEM). This work is central to delivering on our purpose and supporting national and global commitments to mitigating climate change.

While our customers continue to expect us to provide safe, reliable, low-cost services and support a low emissions future, they are concerned about the extent of our environmental impact, and value the protection of Tasmania’s endemic flora and fauna species, unique wilderness values and cultural heritage.

At its heart, Corporate Social Responsibility (CSR) at TasNetworks is about building trust. Trust is developed by listening to our people, our customers and the community, developing plans which reflect their values and delivering on those commitments.

Given the significant and persistent impact of TasNetworks electricity infrastructure on Tasmania’s threatened bird life, the updated Threatened Bird Strategy reflects a continuing and necessary commitment for us to meet our future vision and deliver on our purpose.

To maintain accountability and trust, TasNetworks will report on progress and impacts to our customers and shareholders openly and transparently. We are committed to ongoing collaboration and consultation with key stakeholders and community representatives to ensure our plans are supported and understood.



7.2 TasNetworks Sustainable Development Goals (SDGs)

Our focus United Nations Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

For us the SDGs can help define our CSR impacts and opportunities, and communicate how we can deliver our purpose in a way that is relevant and inspiring to our people and the Tasmanian community.

We have aligned reporting of our key CSR performance indicators with our focus SDGs.



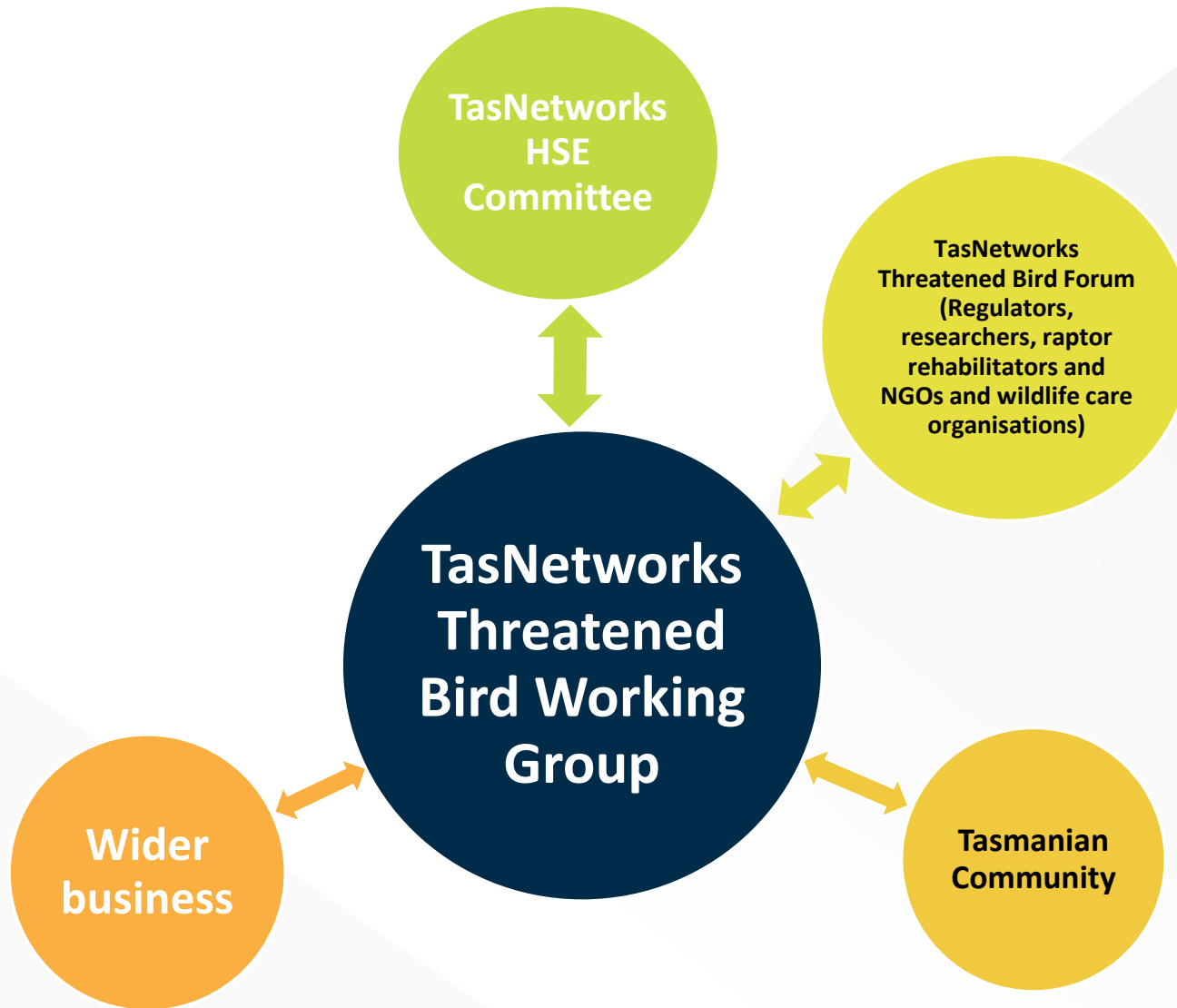
Goal 15, Life on Land is to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Specifically, target 15.5 states that we'll take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species.

Images: Scott Linnane



8 Who is responsible for delivering the Threatened Bird Strategy?



Working collaboratively with key stakeholders

The implementation and execution of the TasNetworks Threatened Bird Strategy is built on successful collaboration and strong working relationships between key internal and external stakeholders. This collaboration has been underpinned by a clear framework for maintaining accountability and support. Sharing new learnings, feedback and research, has helped to ensure that the aims of the strategy are front of mind and remain fit for purpose.

TasNetworks Threatened Bird Working Group are the custodians responsible for the delivery of TasNetworks Threatened Bird Strategy. They meet on a regular basis to ensure that the objectives and initiatives described by the strategy are being delivered.

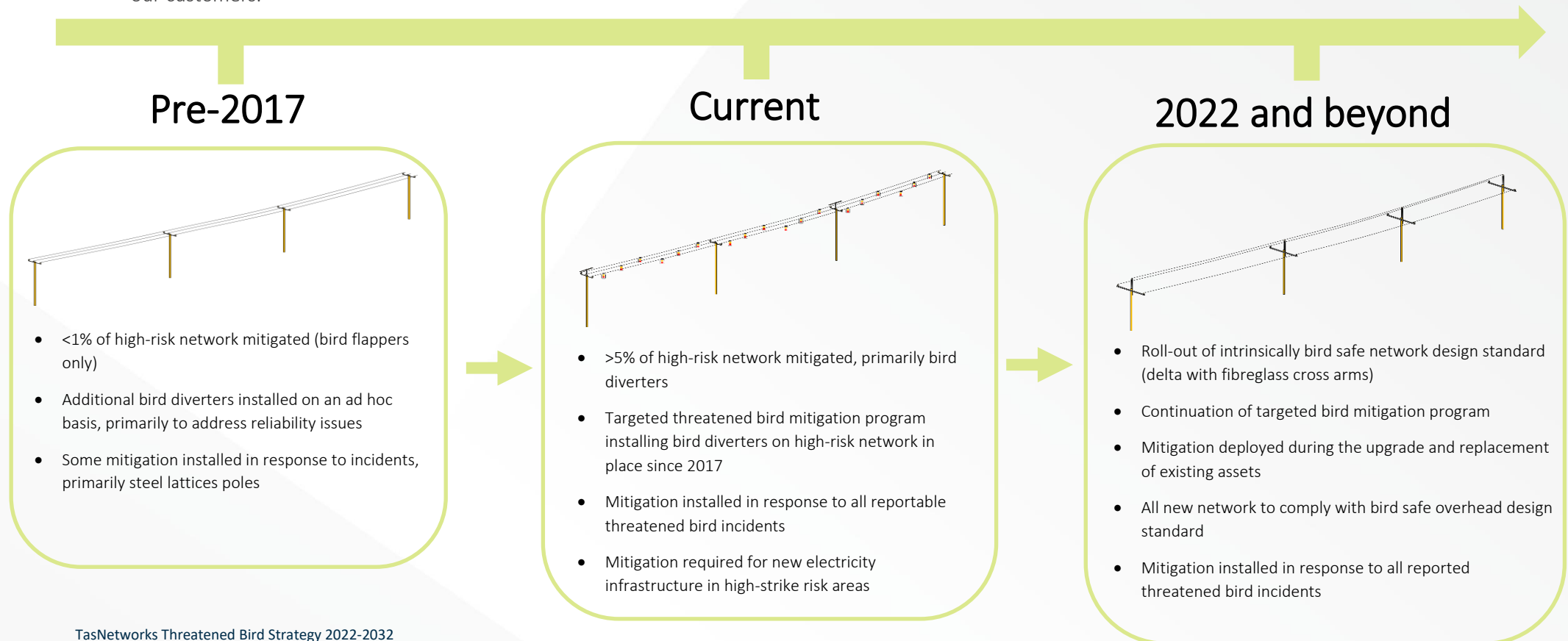
The **TasNetworks HSE Committee** provides high-level direction and support to the Threatened Bird Working Group. They meet on a monthly basis or as needed.

The **TasNetworks Threatened Bird Forum** meets at least every 12 months. The forum seeks to foster constructive working relationships with the aim of sharing information, research and feedback to improve the protection and conservation of Tasmania's threatened bird life.

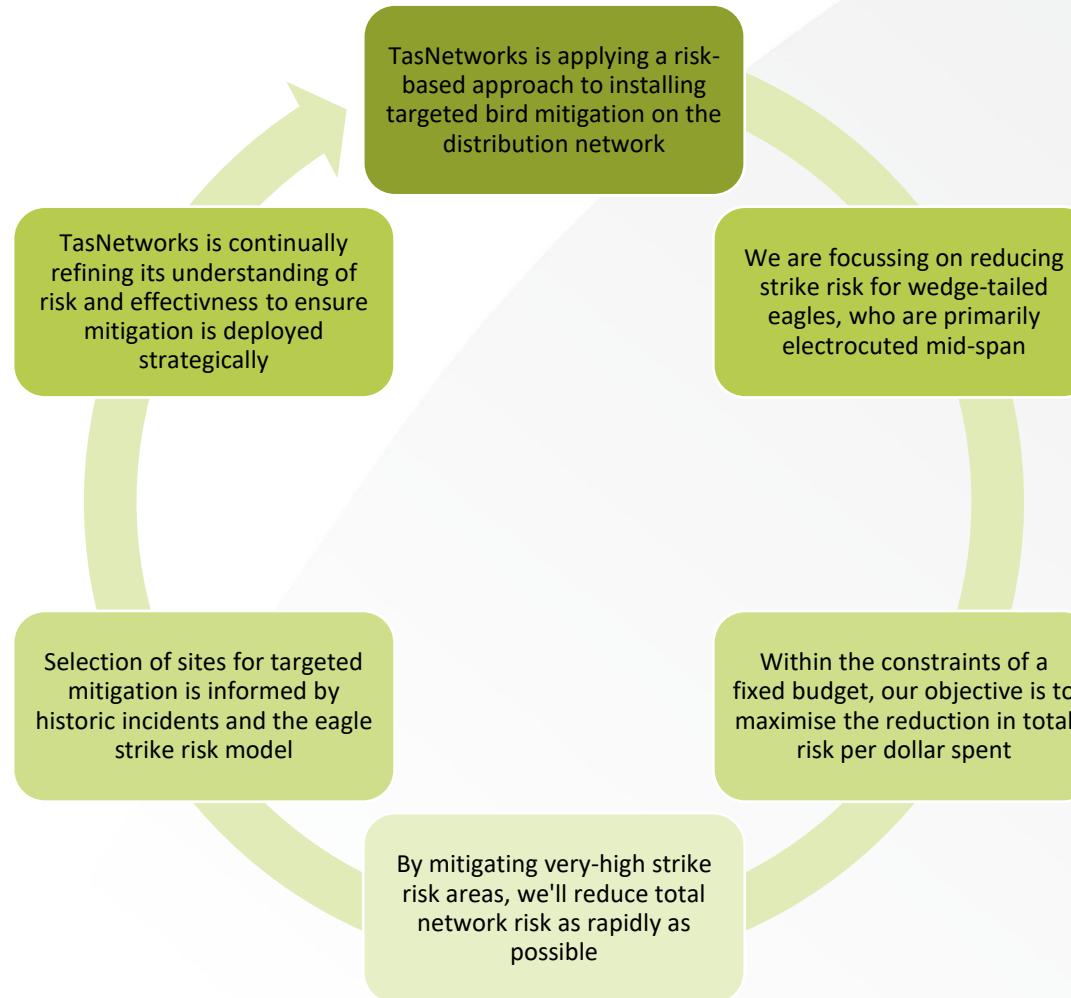
9 How is TasNetworks making the network safer for threatened birds?

Over the last five years, TasNetworks has accelerated the roll-out of bird mitigation devices, primarily bird diverters (or bird flappers), on the distribution network. While these devices have demonstrated a level of effectiveness in mitigated areas, they will become less effective and are expensive to maintain and replace over time. Therefore, TasNetworks is gradually transitioning away from bird diverters as the primary mitigation measure and implementing a more intrinsically 'bird safe' overhead network design.

The new overhead network design standard will significantly decrease the risk of electrocution for all bird species (both mid-span and pole-top), by increasing the separation between live electrical components (by elevating the centre phase above the two outer phases on high-voltage lines into a triangular or 'delta' configuration) and by replacing conductive steel cross-arms with non-conductive fibreglass cross-arms. This will progressively reduce the risk of electrocutions for threatened birds on both new and existing electricity infrastructure as well as making our assets safer and more reliable for our customers.



9.1 Identifying and installing targeted bird mitigation on the distribution network



9.2. Responding to incidents

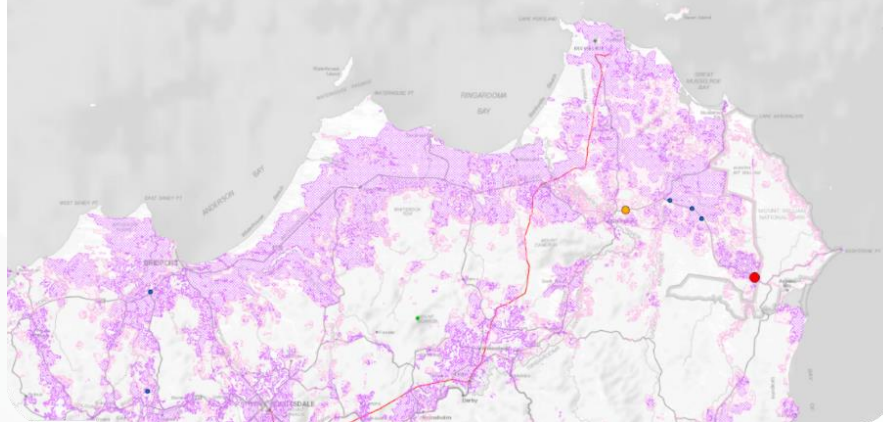
TasNetworks responds to all incidents involving threatened birds and our overhead electricity infrastructure by installing bird mitigation at the incident site, generally within seven days. Incident response mitigation reduces the risk of repeat incidents and demonstrates to our customers that we'll take action in response to an incident.

TasNetworks encourages all customers and team members to report suspected incidents via the TasNetworks website or by calling our call centre on 132 044.

9.3. Making new poles and wires safer

Power lines are long lived assets with an average expected life of up to 50 years. Therefore, TasNetworks will require that the construction of all new high-voltage distributions lines within high-strike risk areas, to be built to meet the requirements of our new 'bird safe' overhead design standard. By ensuring all new lines are inherently safe for threatened birds, TasNetworks will minimise any potential increases in electrocution and collision risk over time as the size of the network increases to serve new customers and communities.

The eagle strike risk model on TasNetworks geographic information system (GIS)



A Tasmanian wedge-tailed eagle safely perching on a transmission tower. Image: Elizabeth Latham

9.4 TasNetworks eagle strike risk model

All new designs must consider TasNetworks eagle strike risk model and include additional mitigation measures when building, maintaining or replacing electricity infrastructure. The eagle strike risk model is a heat map which categorises the risk of eagle strike across the distribution network to help ensure the prioritisation and installation of mitigation measures are strategic, cost effective and risk-based. The model was developed using data from TasNetworks historic threatened bird incidents, known risk-factors and expert opinion.

10 Working collaboratively with our partners



Forming and maintaining constructive partnerships with organisations and individuals, will remain a pivotal part of the TasNetworks Threatened Bird Strategy over the next ten years.

Partnerships aligned with the aims and pillars of the strategy, will reinforce and support strategic and long-term outcomes as well as contributing to the wider conservation and protection of listed threatened species.

Since 2016, a number of highly successful partnerships have helped us build greater awareness, mitigate our impact and contribute to improved understanding of Tasmania's birds of prey. These include Bonorong, Nature Trackers (aka Where Where Wedgie), UTAS (Dr. James Pay's eagle trackers and research), Raptor Refuge and the Tasmanian Museum and Art Gallery.

Our 2022-2032 Strategy will continue to seek out, foster and leverage partnerships which create shared value outcomes, actively engage the community and support

the aims of our strategy in line with TasNetworks Corporate Social Responsibility Strategy and Partnership Framework.

To find out more about TasNetworks current Threatened Bird Partnerships or to submit a partnership application, visit the TasNetworks website.



11 References and further reading

Key TasNetworks documents

- [Environment and Sustainability Policy](#)
- [Environment and Sustainability Risk Register](#)
- [Environmental Handbook](#)
- [Animal and Wildlife Interactions Procedure](#)
- [Threatened Bird Risk Mitigation Plan](#)
- [Eagle Strike Risk Model – final methodology report](#)
- [Threatened Bird Mitigation Scoping Work Practice](#)
- [Threatened Bird Incident Response Work Practice](#)
- [Threatened Bird Nest Management Work Practice](#)
- [Threatened Bird Incident Determination Work Practice](#)
- [Bird ID Guide](#)
- [Threatened Bird Strategy \(2016-21\)](#)
- [Work Practice - Install Diverters on the Distribution System](#)
- [Distribution design standard – overhead systems](#)
- [Distribution construction standard – overhead systems](#)

Image: Dean Hohn



12 Version control

Action	Name and title	Date
Prepared by	Thomas Webster	1/5/2022
Reviewed by	Claire Blackall	1/6/2022
	Ed Parker	1/6/2022
	Sol Foster	1/6/2022
Endorsed by	HSE committee	14/6/2022
Review Cycle	2 years	