environment.nsw.gov.au

Hunter Conservation Investment Strategy

Department of Climate Change, Energy, the Environment and Water

NSW GOVERNMENT

Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images, or names of deceased persons in photographs or historical content.

Artist and designer Nikita Ridgeway from Aboriginal design agency Boss Lady Creative Designs created the People and Community symbol.

Cover photo: Regent honeyeater, *Anthochaera phrygia*. Mick Roderick/DCCEEW

Published by:

Environment and Heritage
Department of Climate Change,
Energy, the Environment and Water
Locked Bag 5022, Parramatta NSW 2124
Phone: +61 2 9995 5000 (switchboard)
Phone: 1300 361 967 (Environment and Heritage enquiries)
TTY users: phone 133 677, then ask for 1300 361 967
Speak and listen users: phone 1300 555 727, then ask for 1300 361 967
Email: info@environment.nsw.gov.au
Website: www.environment.nsw.gov.au

ISBN 978-1-76186-018-8
EH 2025/0324
September 2025

Find out more about your environment at:

www.environment.nsw.gov.au

Contents

List of figures

1. Introduction

1.1 Purpose of this strategy

This strategy identifies the key strategic conservation priorities and actions to be undertaken in the Hunter region. Significant and ongoing investment is expected in the region, including as part of biodiversity offsetting associated with development of renewable energy zones and associated NSW Electricity Infrastructure Roadmap projects.

By identifying conservation priorities and actions for the region, the strategy seeks to guide any investment being made into conservation. Alongside investment from biodiversity offsets, conservation investment may also occur through other NSW programs, and partnerships with other government and non-government organisations. Coordinating this investment is an opportunity to optimise conservation outcomes through complementary efforts.

The strategy is intended to be refined over time to strengthen supporting analysis, improve prioritisation of investment across programs, and incorporate feedback from stakeholders, partners and community members in the Hunter region.

The strategy has been developed for the purposes of section 6.3A of the Biodiversity Conservation Regulation 2017 and will guide the selection of biodiversity offsets under any strategic offset delivery agreement entered into in respect of major project developments in the Hunter-Central Coast Renewable Energy Zone (REZ).

1.2 Relationship to other strategies and programs

This strategy has drawn on, and sits alongside, other statewide strategies relevant to the Hunter region, including the Biodiversity Conservation Investment Strategy (BCIS), National Parks Establishment Plan and the NSW Koala Strategy. It also draws on program level investment in threatened species and ecological communities through Saving our Species and private land conservation. This strategy was informed by current and past regional strategies such as the Hunter Regional Plan 2041, the Lower Hunter Regional Conservation Plan (2009) and foundational studies for the Lower Hunter Strategic Assessment.

Section 3 of the strategy outlines planned implementation, including from existing programs and new ways to improve conservation outcomes. NSW programs are expected to have regard to the strategy within the individual decision-making frameworks that apply to each. The strategy may inform and complement strategic conservation planning at a more localised level. The strategy will be reviewed when the NSW Government releases the Nature Strategy for alignment.

1.3 About the Hunter region

For the purposes of this strategy, the Hunter region is defined by the Hunter-Central Coast REZ and land that is within 10 km of the Hunter Transmission Project, which extends beyond the edge of the REZ at its southern end (Figure 1).

It covers approximately 8,598 km^2 and includes the cities of Newcastle and Maitland and the regional centres of Cessnock, Singleton, Morisset and Muswellbrook on the lands of the Awabakal, Bahtabah, Biraban, Darkinjung, Mindaribba, Wanaruah, and Worimi people (Figure 2). Local councils in the Hunter region are the Upper Hunter, Maitland, Muswellbrook, Singleton, Cessnock, Lake Macquarie, Newcastle, Port Stephens and Dungog councils (Figure 2).

The Hunter region has a sub-tropical to temperate climate, with distinct seasonal variations in temperature in the Upper Hunter and temperatures that vary less in the Lower Hunter closer to the coast. Rainfall varies from the coast inland and is greatest in summer and autumn, with a higher proportion of winter rainfall on the coast (DCCEEW 2024a). Climate projections suggest temperatures will continue to rise, with severe fire weather projected to increase in spring and summer. Rainfall is projected to decrease across all seasons, especially winter (DCCEEW 2024a).

The Hunter River is the main catchment, and supports important aquatic habitats, with tributaries including the Williams, Paterson and Allyn rivers. Significant conservation assets surround the region, including Wollemi, Goulburn River, Yengo and Barrington national parks. There are also significant state forest areas, including some dedicated flora reserves, 3 of which the NSW National Parks and Wildlife Service (NPWS) manages to protect koala habitat.

The Hunter region has rich and unique biodiversity and a diversity of ecosystems including estuaries, wetlands, fertile valleys, woodlands and high mountain ranges. The region includes 28 threatened ecological communities, 7 endangered populations and more than 200 threatened species, as covered in section 2. These values are impacted by key threatening processes such as plant and animal pathogens, land clearing, feral animals, weeds and increases in extreme weather events due to climate change.

Development in the Hunter region

The Hunter region is home to around 860,000 people with further urban growth planned for over the next decade (DPE 2022a). The local economy includes the mining, power generation, grazing, cropping, viticulture and defence sectors.

The Hunter region has excellent renewable energy resources and existing infrastructure such as power stations, networks, transport and ports that can contribute to a renewable energy future. Future projects will include road infrastructure upgrades such as the Port of Newcastle to REZ upgrades and the Singleton Bypass, electricity network upgrades such as the Ausgrid upgrades between Kurri and Singleton substations, new solar farms such as Maison Dieu, and battery storage projects at the former Liddell and Eraring power stations.

Nearby forestry areas have been harvested for more than 150 years. In addition to timber, these forests offer significant recreational opportunities for the Hunter and Central Coast communities.

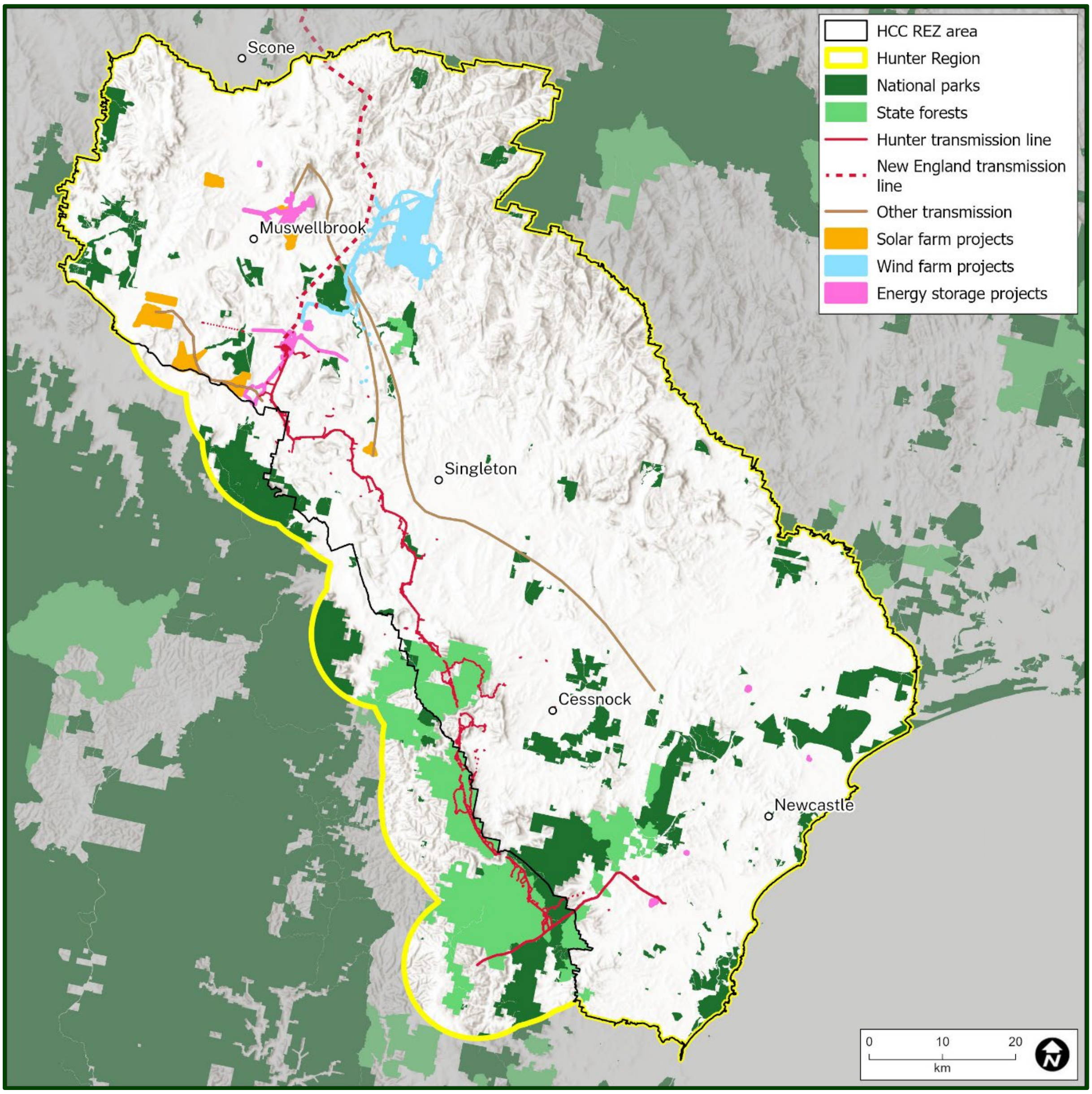

Figure 1 **The Hunter-Central Coast REZ and key renewable energy projects in the region**

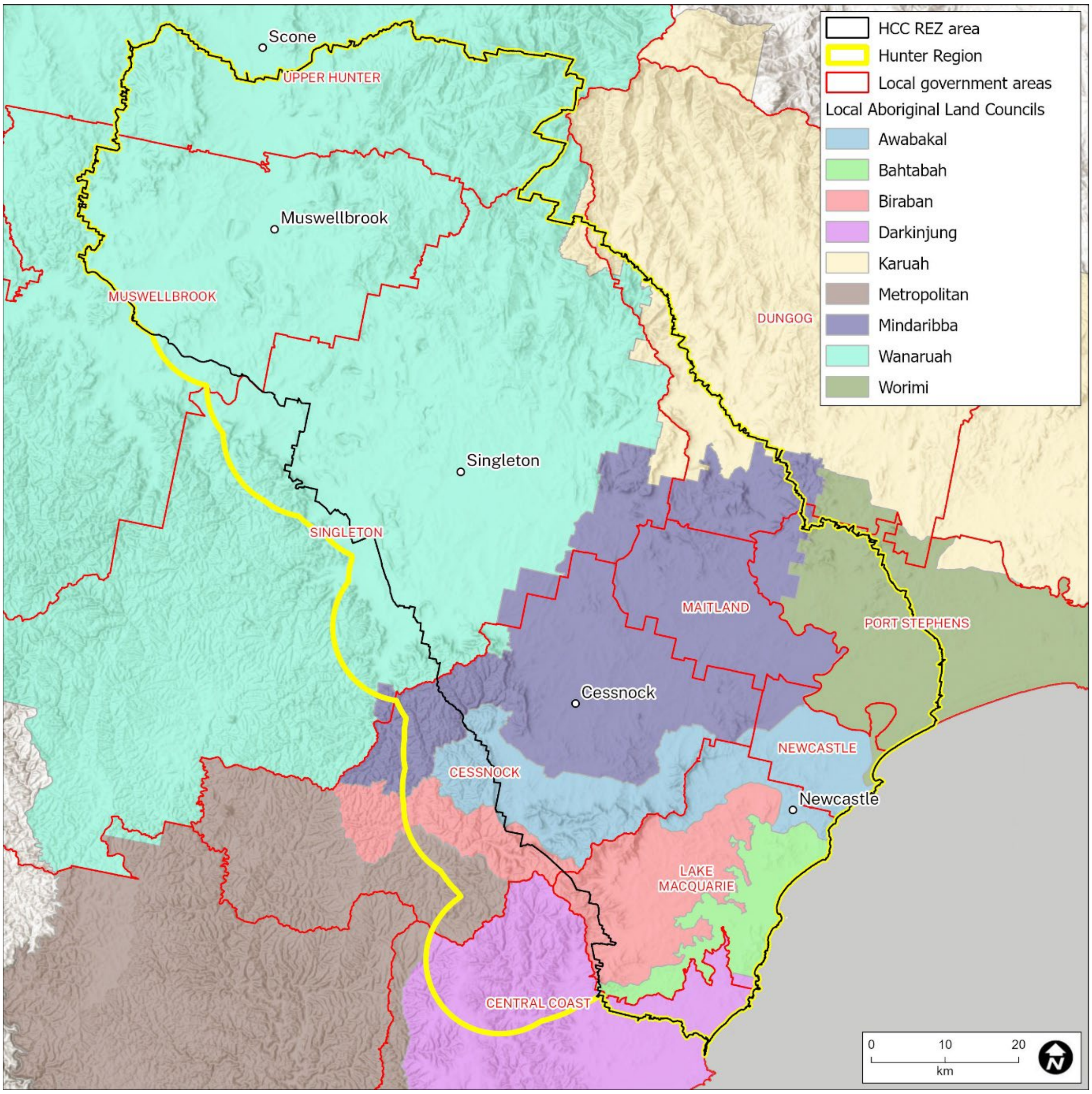

Figure 2 **The Hunter-Central Coast REZ, Local Aboriginal Land Councils and local government areas in the region**

2. Conservation objectives and priorities

2.1 Strategy objectives

The Hunter Conservation Investment Strategy has been developed to:

- integrate conservation programs and priorities to optimise delivery of regional conservation outcomes
- protect regionally significant conservation values
- improve ecological connectivity and resilience to climate change
- restore degraded ecosystems and habitats
- contribute to a comprehensive, adequate and representative protected area system
- deliver social benefits for the region.

To identify areas in the Hunter region that will be most important for achieving the strategy objectives, key conservation assets were selected for analysis. The conservation assets align with the priority conservation values identified in other strategies and programs. Ecological restoration has been included as an additional focus to build on existing programs that target land in moderate to good condition. Restoration to improve integrity and build connections will address degradation and increase ecological resilience.

Key conservation assets analysed in the Hunter region include threatened ecological communities, threatened species habitats, important watercourses and wetlands, wildlife corridors, areas of climate resilience, large intact areas of native vegetation, areas with restoration potential and the protected area system, as set out in section 2.2.

2.2 Key conservation assets in the Hunter region

The key conservation assets in the Hunter region inform focus areas and conservation priorities for investment under the strategy.

Threatened species, populations and ecological communities

A total of 201 threatened species has been recorded in the Hunter region. High-value habitat has been identified using habitat suitability modelling for 62 threatened species. Habitat suitability modelling uses species records to identify associated abiotic factors and predict areas of potential occurrence in the landscape. Areas of overlap between habitat suitability models indicates the potential to support multiple species (Figure 3).

There are 7 endangered populations that have very high conservation value due to their small size, separation from other known populations or being at the limit of their range. Populations of *Acacia pendula, Eucalyptus camaldulensis, Eucalyptus parramattensis* C. Hall. subsp. *parramattensis* and *Cymbidium canaliculatum* are all estimated to be less than 1,000 plants in size.

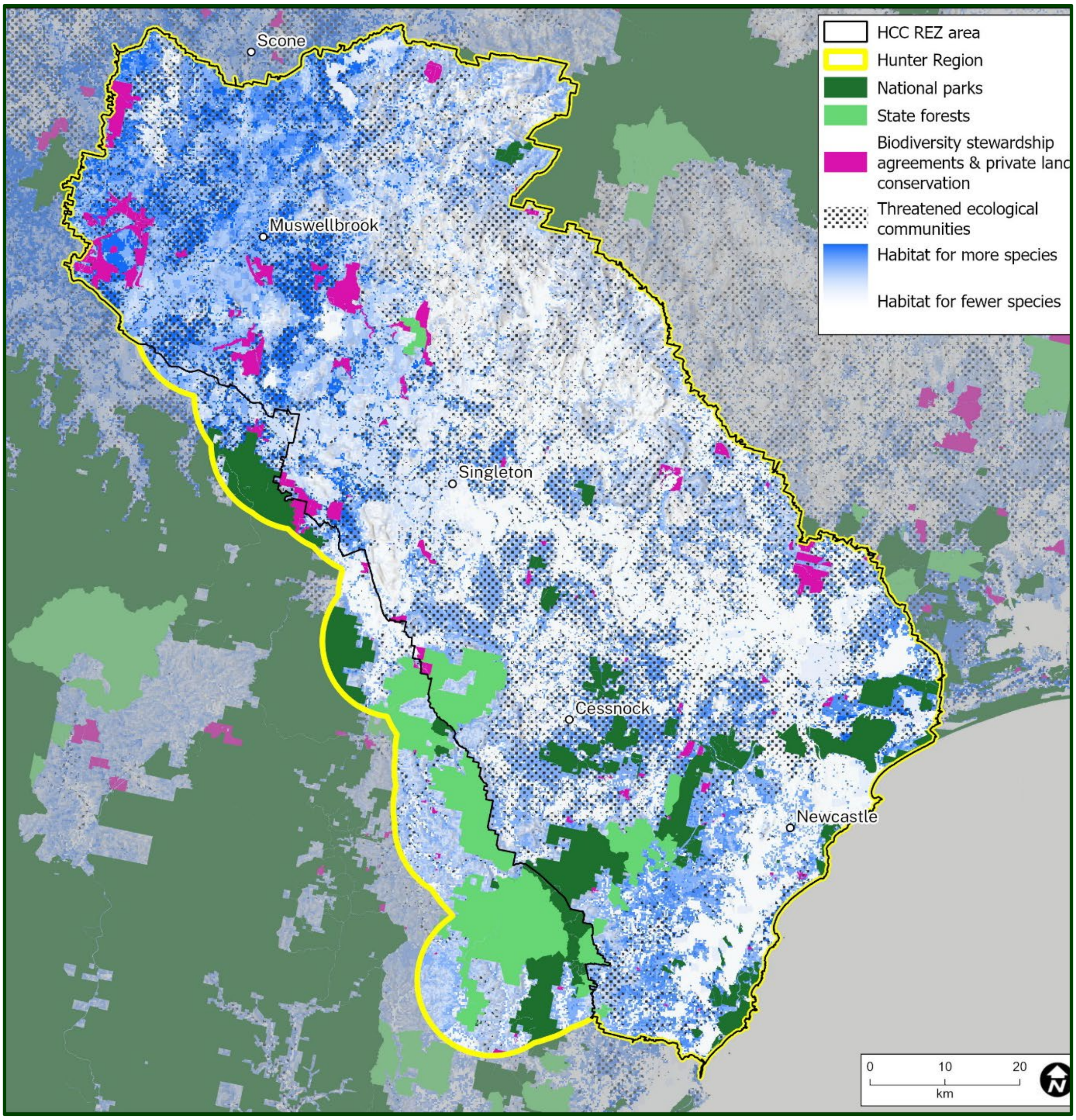

Figure 3 **High-value habitat for threatened species and ecological communities**

The region also hosts important habitat resources for several threatened species. For example, a population of the Littlejohn's tree frog occurs in and around Olney State Forest in the south of the region, where frog ponds have been created and are monitored. There is also a concentration of giant burrowing frog and red-crowned toadlet records at this location.

Important breeding habitats for the critically endangered regent honeyeater occur in the region. Critical feeding resources for the endangered swift parrot are also located in the region. These values are reflected in the designation of an Important Bird Area in Lake Macquarie for the swift parrot and the Lower Hunter Key Biodiversity Area for both species. The Hunter region is the only coastal catchment in which a population of river red gum occurs. The present-day occurrence of this population has been reduced to 19 stands with the largest remnant around 20 ha in area.

In the Hunter region, there are several areas of regional koala significance (ARKS) (Figure 4). In the Koala Strategy 2021–2026, the Port Stephens ARKS is nominated as an area for immediate investment to manage the well understood threats to the population. The Lower Hunter, Barrington and Bulahdelah ARKS have been identified as priorities for filling knowledge gaps and delivering local actions (DPE 2022b).

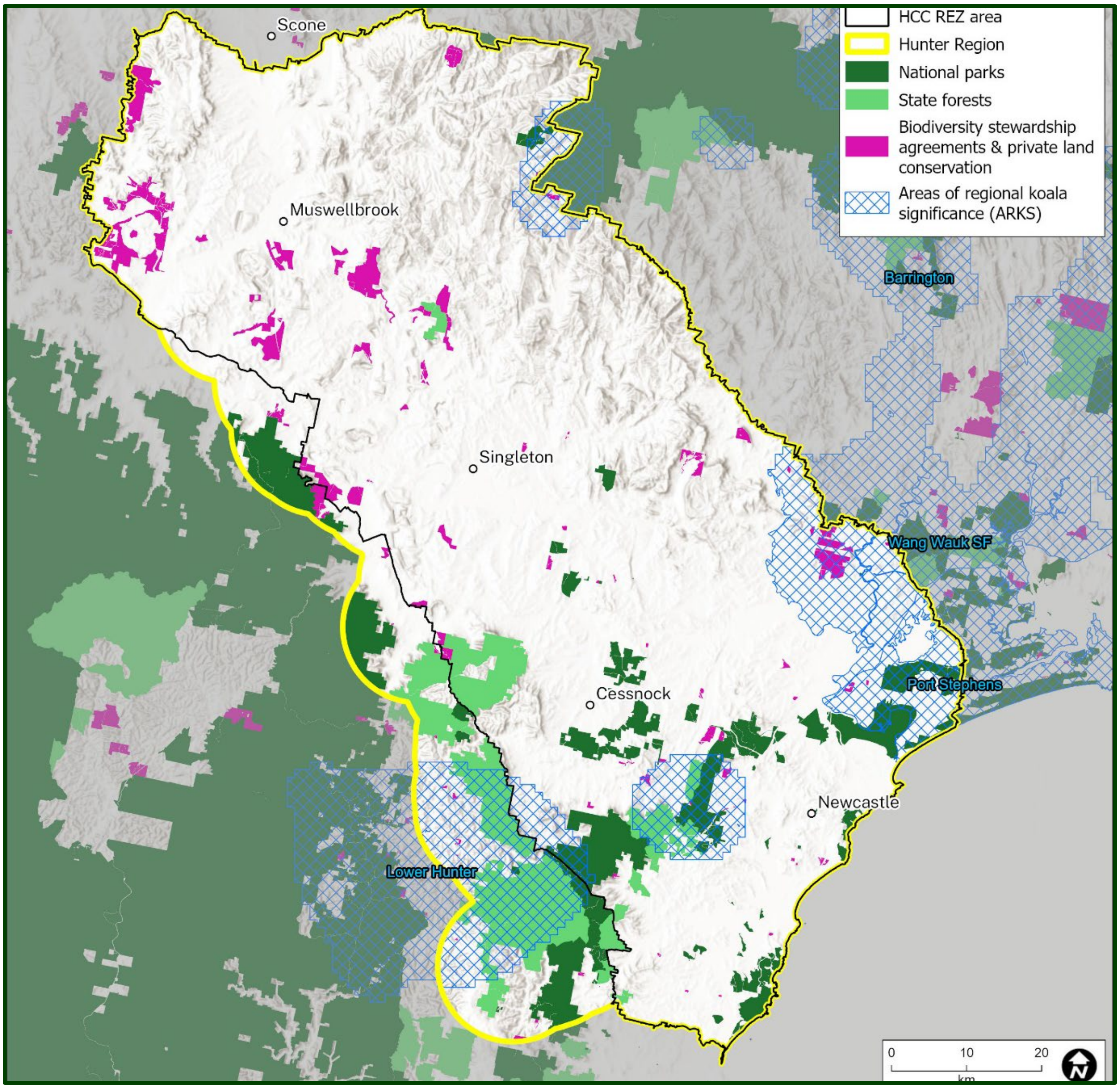

Figure 4 Areas of regional koala significance (ARKS)

Within the Hunter region, 28 threatened ecological communities are known or predicted to occur. The potential for threatened ecological communities to occur has been mapped using vegetation type associations and predicted distribution of plant community types. Of the 28 threatened ecological communities, 12 are mainly localised to the Hunter region and are extremely limited in their distribution (Figure 5). For example, 80% of the remaining Warkworth Sands Woodland endangered ecological community occurs in a single location around 15 km south-east of Warkworth and it is not protected in reserve (OEH 2022a). Few mapped occurrences of the endangered Hunter Floodplain Red Gum Woodland endangered ecological community, containing the endangered River Red Gum population, exceed 10 ha (OEH 2022b).

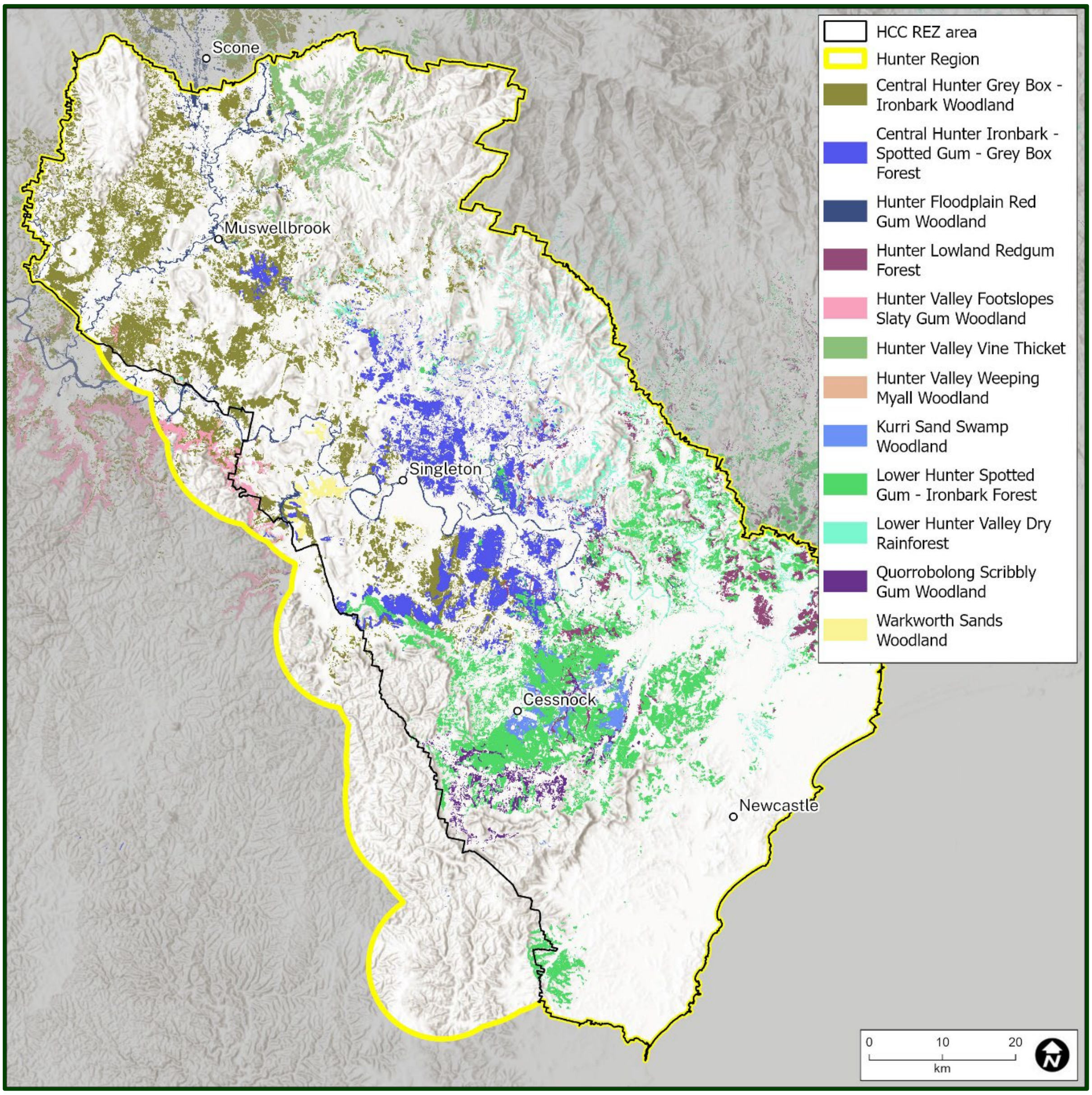

Figure 5 **Threatened ecological communities with distribution limited to the region**

Connectivity and important watercourses

Connected landscapes enable plant and animal populations to move across the landscape to access resources, maintain genetic diversity and adapt to climate change. Vegetation in the valley is highly fragmented and maintaining connectivity requires careful planning.

Currently, there are few examples of connected and protected corridors within the region. Many of the building blocks of a corridor are in place to connect Watagans National Park to Hunter Wetlands through state forest and private land conservation. There are no other established corridors connecting the south-west boundary of the region to the north-east boundary. A significant corridor is located outside of the region's south-west boundary, travelling south-east from Ulan in the central west to the New South Wales Central Coast, that also connects to the Blue Mountains National Park further south.

The major river in this region is the Hunter River. The main tributaries to the Hunter River within the region are the Pages River, Paterson River and Williams River. Beyond Hexham, to the north-west of Newcastle, the Hunter River divides into 2 branches that surround the Ramsar-listed Kooragang Wetlands. The riparian zone of the Hunter River has been highly modified over much of its length and restoration potential is limited (DCCEEW 2023). The low recovery potential and surrounding land uses may limit the utility of the riparian zone in creating connectivity.

However, high potential to restore riparian corridors has been identified in several other areas, including creek lines between Muswellbrook and Mount Royal National Park. Further south, restoration potential is high along and between Glendon Brook and Reedy Creek, south of Lake St Clair in the vicinity of Mirannie. Intact riparian corridors also occur in these areas and have been identified as priorities for conservation in the NSW River Styles spatial dataset (DCCEEW 2023).

Corridor analysis (Figure 6) identifies opportunities to create vegetation and habitat connectivity across the landscape by linking protected areas at higher elevations through high-condition remnants on the lower slopes and valley floors, filling gaps with restoration (DCCEEW 2024c).

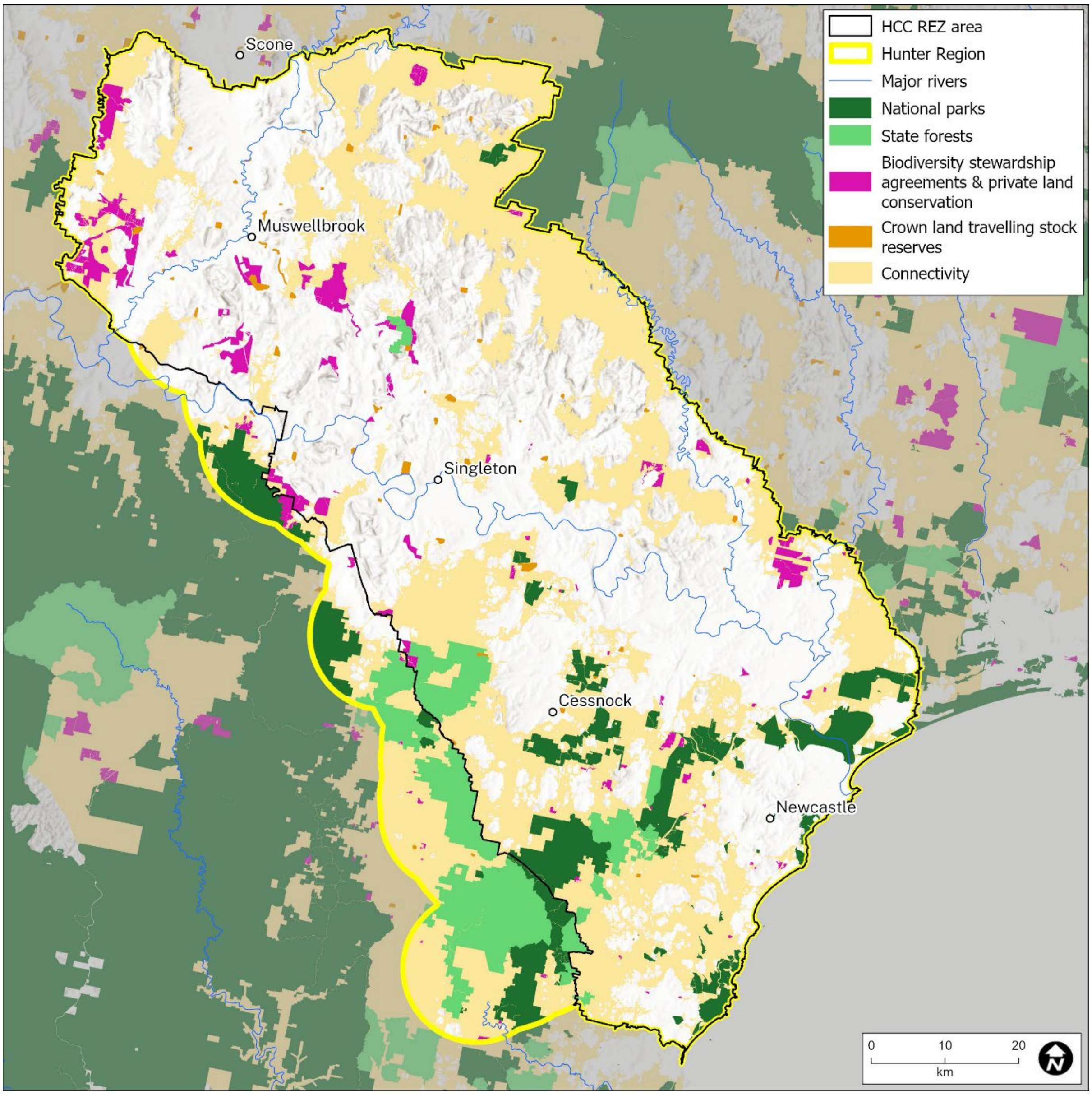

Figure 6 **High-value corridors and opportunities in the landscape**

Remnant vegetation and ecological condition

Remnant vegetation in the Hunter region supports animal and plant populations, and its ecological integrity will be important in efficient and effective restoration. Ecological condition analysis (DCCEEW 2024b) shows that opportunities remain in the Hunter region to protect large patches of vegetation in relatively high condition that are currently outside of the protected area system (Figure 7). Although not all these areas are threatened ecological communities, large remnants of intact vegetation are important regional conservation assets that support ecological integrity at a landscape level and provide a spine of connectivity.

Vegetation remnants at lower elevations tend to be threatened vegetation communities and provide an opportunity to restore or reconstruct vegetation and habitats to provide stepping stones between larger protected areas. Restoration will be critical for reconnecting vegetation across the valley floor to improve ecological function and ensure resilience to climate change and other threats.

A network of travelling stock reserves on the valley floor, generally to the north of Cessnock (Figure 6), provides an opportunity to increase connectivity. These areas range from 1 ha or less to more than 300 ha over a total of 1,364 ha in the region. Ecological condition is variable and will require investment in restoration.

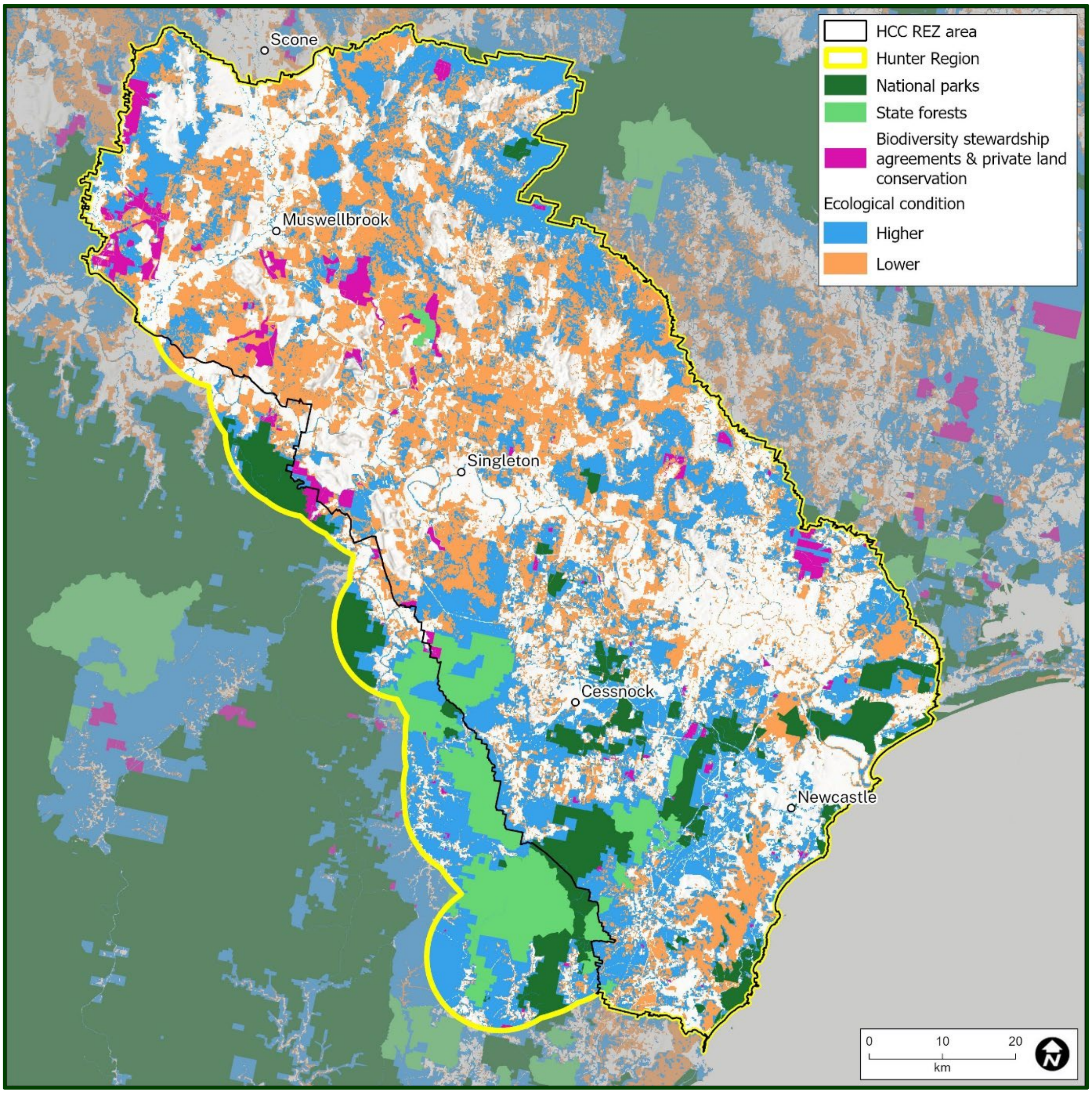

Figure 7 **Ecological condition in the landscape**

Protected areas and reserves

The Hunter region includes small to medium sized reserves along the coast and hinterland areas, including Watagans National Park (7,798 ha), Sugarloaf State Conservation Area (3,926 ha), Werakata State Conservation Area (2,642 ha) and National Park (3,336 ha), Hunter Wetlands National Park (45 ha) and Tilligerry State Conservation Area (4,570 ha). In the valley, north of Werakata National Park, there are only 3 small and relatively isolated reserves, Tiraki Nature Reserve (609 ha), Belford National Park (294 ha) and Tangory Nature Reserve (504 ha). The Hunter region is fringed by other significant national parks including Goulburn River, Wollemi and Yengo, and Yango State Conservation Area to the south. Mount Royal and Barrington Tops national parks are located to the north.

Protected areas on private land in the Hunter region include 38 established biodiversity stewardship agreements (BSAs) covering a total of around 8,900 ha, 26 BSAs in development which would cover around 900 ha, and 75 permanent conservation agreements totalling around 12,300 ha.

Achieving a more comprehensive, adequate and representative (CAR) protected area network should be prioritised. The Hunter region is mainly within the Sydney Basin and the NSW North Coast Interim Biogeographic Regionalisation for Australia (IBRA) regions. Most of the sub-landscapes in the Sydney Basin section of the region are relatively well reserved. A number of unreserved or poorly reserved landscapes occur in the NSW North Coast section of the region (Figure 8).

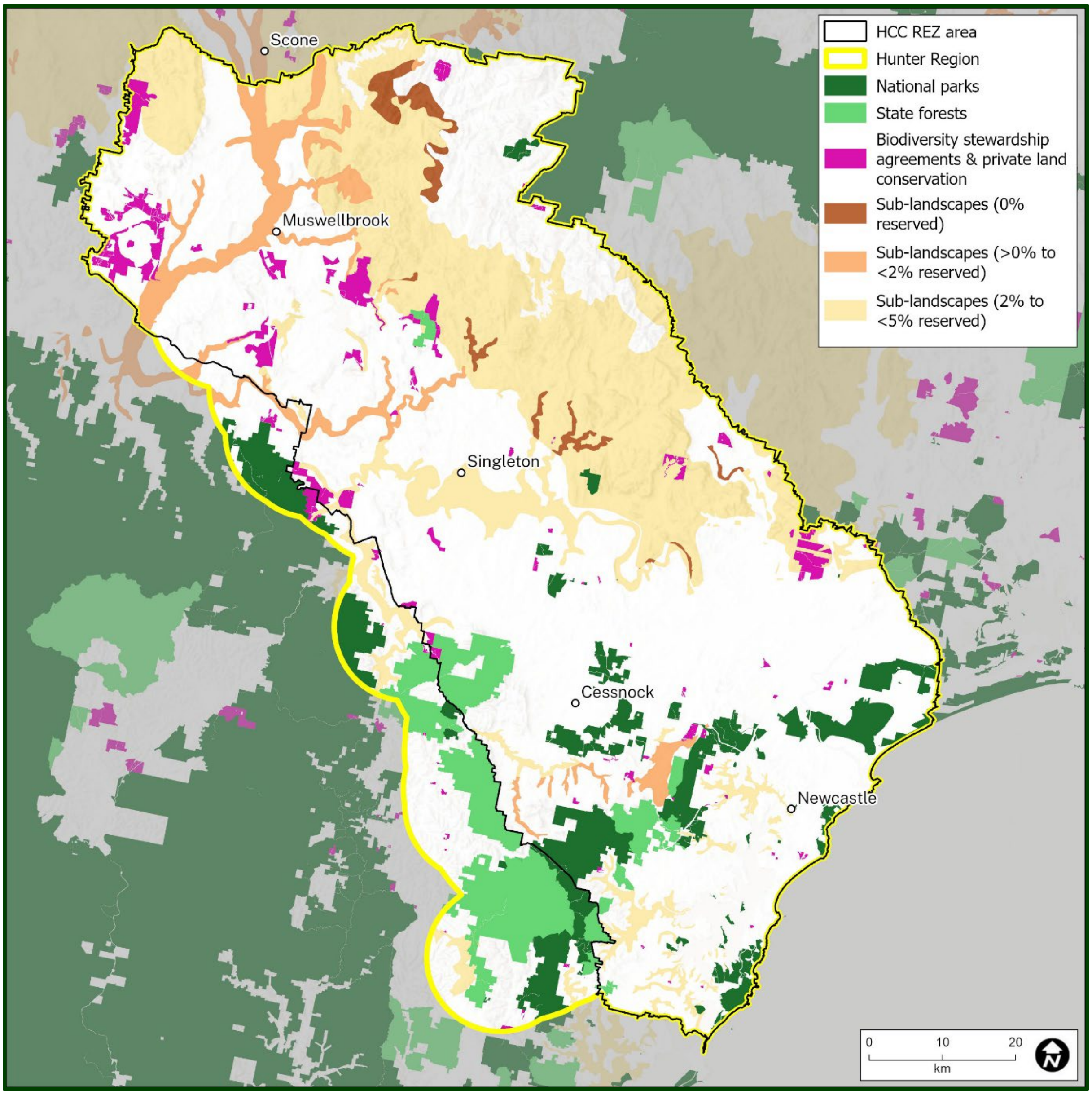

Figure 8 **Under-reserved landscapes (0–5%) in the IBRA sub-regions**

2.3 Conservation priorities

The relative conservation value of land in the region has been assessed with a combined analysis of data on the conservation values in the area (Figure 9). Priority areas for investment have been derived from this analysis (Figure 10), taking into account existing land uses in the region. Actions have been identified below to protect, restore and connect ecosystems to deliver regional conservation outcomes in accordance with the strategy's objectives.

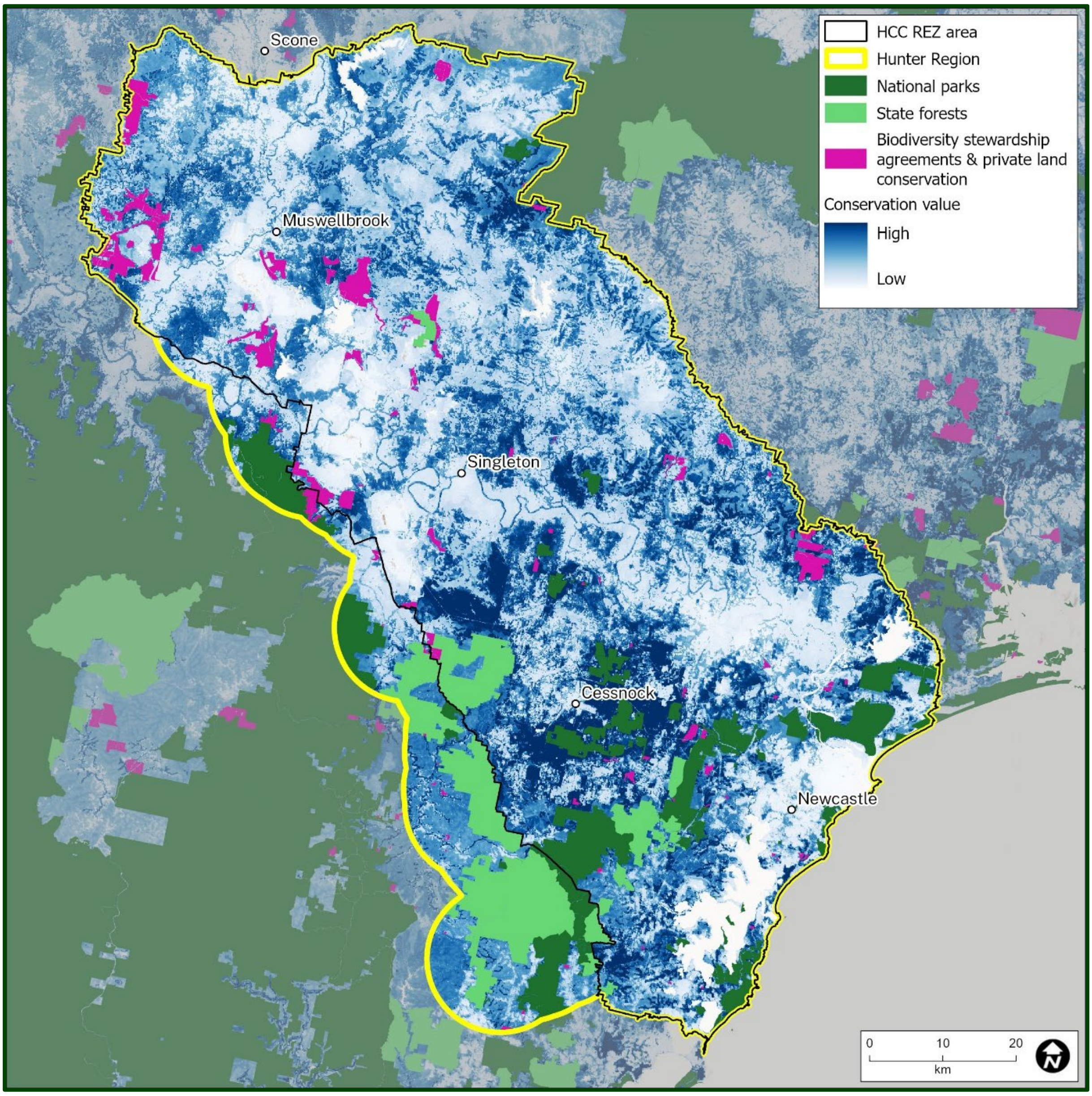

Figure 9 **Conservation value of land within the Hunter region**

Rebuilding connectivity and resilience

Ecological connectivity and resilience to climate change would be improved in the Hunter region by establishing and restoring corridors in the priority investment areas in Figure 10. Conservation efforts should be focused on restoring connections across the valley floor to link larger reserves to the north and south. New protected areas can augment stepping stones created by existing National Parks, State Forests, private land conservation areas and offset properties.

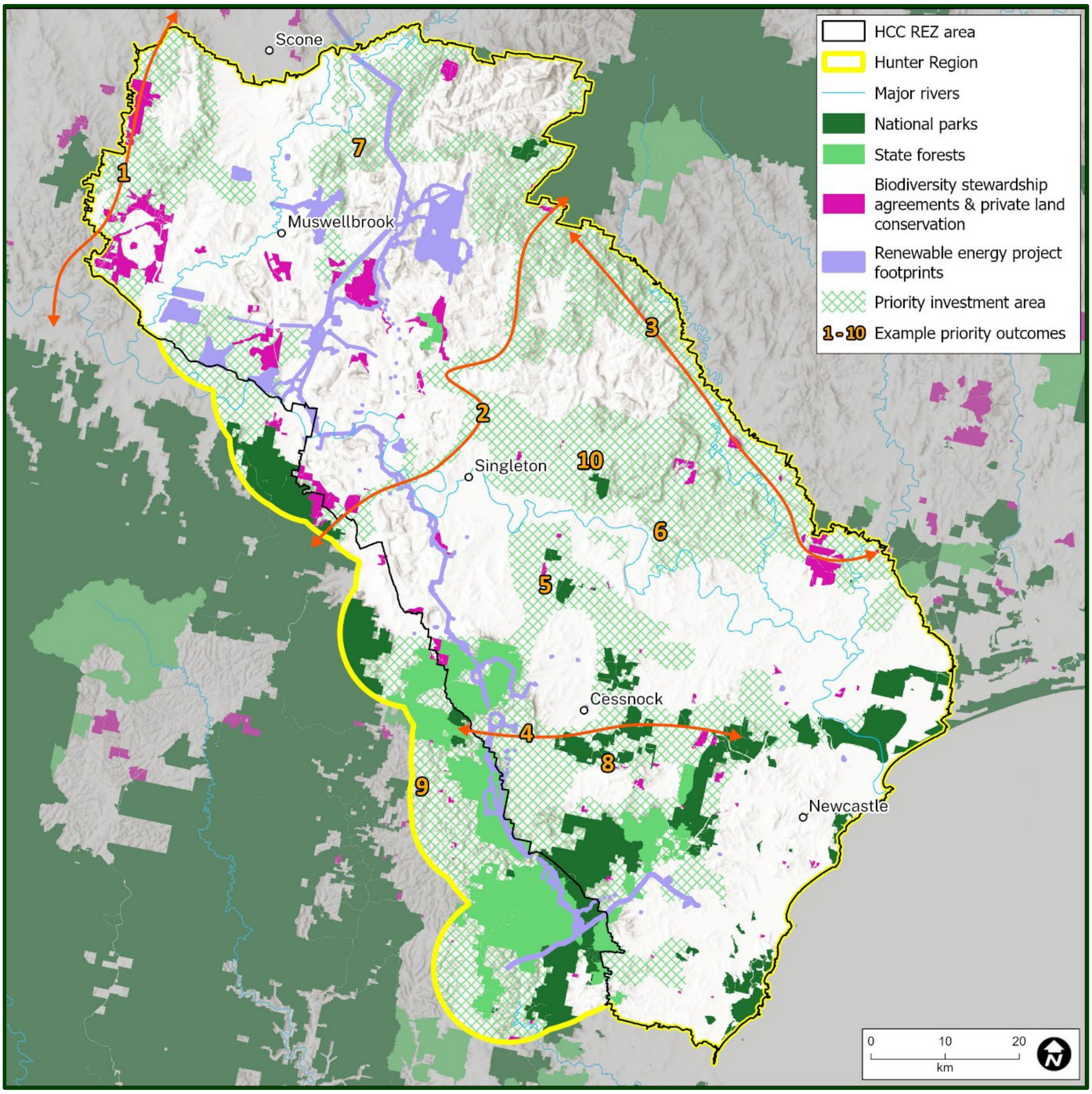

Figure 10 **Priority investment area and example outcomes in the Hunter region**

Strategic investments in the region have been enhancing and extending a corridor from Olney State Forest to Hunter Wetlands National Park and the coastal reserves beyond. With further targeted investment, this corridor could be completed by closing the gap between Sugarloaf State Conservation Area and Hunter Wetlands National Park.

Other corridors to target for investment include (not in priority order):

1. north–south link connecting Wollemi and Goulburn River national parks to Manobalai Nature Reserve and offset areas west of Muswellbrook on to Towarri National Park to the north

2. east–west link connecting Wollemi National Park through high quality remnants along the Hunter River, north of Singleton and around Lake St Clair to Mount Royal National Park
3. north–south link connecting Myall Lakes National Park on the coast to higher elevation areas in and around Barrington Tops National Park
4. east–west link connecting Polkolbin State Forest, through Werakata State Conservation Area and National Park to Sugarloaf State Conservation Area.

Corridors can be established by protecting high value vegetation or restoring degraded ecosystems. Ecological restoration could be targeted to areas with potential to provide habitat for multiple threatened species, or in known areas of important habitat to maximise impact, such as land surrounding:

5. Belford National Park and Tikari Nature Reserve to build a composite protected area with private land conservation and Travelling Stock Reserves
6. south of Tangory Nature Reserve, including strategic rehabilitation of the Hunter River, to increase connection between high quality remnants along and across the river
7. patches of good condition vegetation remnants north of Muswellbrook.

Consolidating protected areas

Extending protected areas to encompass high value vegetation on lower slopes would help link existing reserves to the valley floors. Remnants of good condition vegetation on the valley floor are also important to preserve as they are likely to contain threatened species and ecological communities. Extending protected areas will be the focus for areas that are modelled to be in high condition and that have a high potential to provide threatened species habitat for one or more species. This could include considering the role of other public land such as Crown Land or travelling stock reserves in conservation within the Hunter region.

Opportunities to consolidate high value vegetation in protected areas include lands around:

8. Werakata National Park and State Conservation Area
9. Yengo National Park and Pokolbin, Corrabare and Olney state forests and good condition vegetation around these state forests
10. Tangory Nature Reserve.

New or additions to protected areas should also focus on ensuring that threatened species and plant community types not currently represented in national parks or private land conservation areas are secured.

Securing regionally significant habitats

The Hunter region is home to many threatened species that require intervention to secure their future in the area. Examples of key habitat resources or threats that require targeted management in the region are outlined below. A more comprehensive list of regionally significant populations and threats will be developed to ensure coordinated investment in conservation activities.

Regentss honeyeater

The Upper and Lower Hunter Valley and the Central Coast are all key areas that are regularly used by the critically endangered regent honeyeater (*Anthochaera phrygia*) for foraging and breeding (Cth DCCEEW 2016). The Hunter Valley has one of 4 key breeding sites for the species, and this area has been the focus of releases of captive bred birds in recent years.

Regent honeyeaters favour box-ironbark eucalyptus forests, especially along creek flats, broad river valleys and lower slopes. Other important tree species also occurring in this region include Lower Hunter spotted gum forests (DCCEEW 2016). These preferred habitats occur across all tenures and opportunities exist to protect and restore sites across the region. In addition to securing and expanding suitable habitat areas, investment in the captive breeding program would support critical efforts to boost the number of birds to sustain the population.

Swift parrot

The Hunter region also contains significant feeding resources for the migratory and critically endangered swift parrot (*Lathamus discolor*). A key biodiversity area occurs around Cessnock, characterised by remnant patches of eucalypt woodland and forest in a highly modified landscape (Cth DCCEEW 2024). A second key biodiversity area occurs in the remnant and fragmented eucalypt forests on the southern margins of Lake Macquarie. Opportunities exist to protect and restore suitable foraging habitat on different tenures to improve the long-term security of the species.

Littlejohn’s tree frog

Significant populations of Littlejohn’s tree frog (*Litoria littlejohni*) and the giant burrowing frog (*Heleioporus australiacus*) have been recorded in Olney State Forest, on the southern boundary of the REZ. Habitat ponds have been created for the Littlejohn’s tree frog by Forestry Corporation of NSW. The population suffers from in-breeding and has limited capacity to disperse. Investment in securing the population and enhancing important habitats can be developed in partnership with Forestry Corporation of NSW.

Orchids

There are 16 threatened orchid species in the region. Three are generally found only in the region. Wyong sun orchid, variable midge orchid and *Genoplesium branwhiteorum* are restricted to the Lake Macquarie and Central Coast local government areas and are known to lay dormant for several years before emerging when conditions are favourable. For these species and other threatened orchids, information on their distribution, abundance and reproduction is poor. Actions that address these knowledge gaps and protect habitats from further loss and degradation are essential to their conservation.

Hunter Valley delma

The Hunter Valley delma is currently known from a narrow corridor of grassland between Maitland and Muswellbrook. Three important populations have been identified in the region, with more surveys needed to understand their habitat management needs, behaviour and demographics. Addressing these knowledge gaps and working with landholders to protect known habitats will be critical to their conservation.

Warkworth Sands Woodland

Warkworth Sands Woodland is an endangered ecological community confined to a small area near Singleton. Securing management of the woodland on private lands is a priority. Updated extent and condition mapping is also needed to guide ongoing conservation investment and action.

Responding to environmental pathogens

Myrtle rust

Myrtle rust disease is caused by a fungal pathogen, *Austropuccinia psidii*. Two species endemic to the Hunter region, *Rhodamnia rubescens* and *Rhodomyrtus psidioides*, are highly to extremely susceptible to infection by the Myrtle rust pathogen and are listed as critically endangered. Conservation investment is best directed to efforts to identify and implement targeted actions that support the species to build resistance to the pathogen.

Chytrid fungus

Chytrid fungus is widespread across New South Wales, affecting amphibian species associated with permanent water. While eradication is not possible, mitigating the impacts through hygiene practices and building resistance to the disease is feasible. Chytrid resistance has been identified in populations of northern stuttering frog around streams in the Watagans. Ongoing investment in projects that build wild population resistance, such as the capture and release of chytrid-resistant stuttering frogs to populations with no resistance, is needed to better understand how chytrid can be managed at the larger scale.

3. Implementation actions

Achieving the conservation outcomes identified under this strategy is intended to draw in efforts across the public and private sector, encourage partnerships and collaboration, and lead to innovation in the way that conservation is delivered at a regional scale.

Significant investment is expected in the region, including as part of biodiversity offsetting associated with the development of the Hunter Transmission Project and the Hunter-Central Coast renewable energy zone (REZ). There are also a range of other government programs contributing to conservation. Better coordination of investment across different programs and funding sources will improve conservation outcomes.

By identifying conservation priorities (section 2.4), the strategy provides a framework for more coordinated investment into conservation. Investment from biodiversity offsetting will be foundational to implementation of the strategy, led by strategic offset delivery agreements which are required to contribute to the outcomes. A clear plan for conservation in the region also has the potential to attract new funding sources and investment, increase efficiency in delivery and reduce duplication to make the most of limited resources.

3.1 Sources of investment in conservation outcomes

Biodiversity offsetting

The transmission project and renewable energy generation and storage capacity projects in the Hunter region will involve significant investments in conservation to offset biodiversity impacts. Consistent with the Biodiversity Offsets Scheme, impacts to biodiversity must first be avoided and minimised. Any biodiversity loss that cannot be avoided or minimised must be offset with equivalent biodiversity gain for the species and plant communities impacted. This investment will be particularly useful in funding restoration to increase connectivity and corridors. It will also increase investment in threatened species, ensuring habitat is managed in ways that increase habitat suitability and addresses local threats. Biodiversity offsets could include those delivered by proponents under strategic offset delivery agreements and the Biodiversity Conservation Trust (BCT), where offset obligations have been transferred through payment to the Biodiversity Conservation Fund.

Strategic offset delivery agreements

Renewable energy projects could contribute to delivering the conservation priorities of the Hunter Conservation Investment Strategy through investment in conservation as part of offsetting to meet regulatory requirements. Agreements for offset delivery could include:

- purchasing and retiring like-for-like biodiversity credits supplied by private, public or Aboriginal landholders with BSAs
- acquiring land to create like-for-like credits and retiring these credits
- completing actions that benefit the conservation and recovery of impacted threatened species and ecological communities.

Any biodiversity stewardship agreements under the Biodiversity Offsets Scheme would ideally be targeted towards priority investment areas (Figure 10) on land that has capacity to create both ecosystems and species credits that will fund management and restoration. Offset investment outside of this priority area may also be considered if it achieves a like-for-like outcome.

For a limited number of species, some offsetting may be delivered using conservation actions where there are interventions in recovery that would be difficult to achieve through vegetation and habitat management under BSAs. Specific management and recovery actions for each species will be developed for the offset program by relevant experts in accordance with the Saving our Species program to deliver enduring, on-ground outcomes for these species.

Under strategic offset delivery agreements, offsetting will be prioritised in this order:

1. Like-for-like credits created via BSAs in the:
    i. priority investment area within the Hunter region
    ii. Hunter region
    iii. 50 km of the Hunter Central Coast REZ.
2. Conservation action (on ground) in the:
    i. priority investment area within the Hunter region
    ii. Hunter region.
3. Like-for-like credits created via BSAs within the Interim Biogeographic Regionalisation for Australia subregion/s in which the obligation arises.
4. Conservation action (research) with direct application to on-ground management outcomes.

National Parks and Wildlife Service reserve acquisition program

Large existing NSW National Parks and Wildlife Service (NPWS) reserves are located on the boundaries of the REZ, providing a foundational contribution to regional conservation outcomes by creating core protected areas to connect to within the

Hunter region. In contrast, vegetation communities on the valley floors are under-reserved, with few protected areas and no effective connections between the larger reserves to the north and south. Strategic expansion of the national park estate is guided by the NSW National Parks Establishment Plan (DECC 2008) which is currently being revised. The NPWS reserve acquisition program could contribute to Hunter conservation priorities where they are best achieved through the transfer of public land to the national park estate or acquisition of other available land.

Within the Hunter region, NPWS could prioritise properties for acquisition that can contribute to the conservation priorities for the Hunter region (Figure 10) as well as:

- secure important habitat features and locations in the region
- fill gaps in the reserve (for example, Wollemi, Goulburn River and Yengo national parks)
- secure good examples of regional ecosystems that are poorly represented in reserves
- protect threatened species not currently recorded within reserves
- protect landscapes and places of special significance to Aboriginal people.

Private land conservation program

The Biodiversity Conservation Investment Strategy 2018 (BCIS) (OEH 2018) establishes the NSW Government's priorities for investing in private land conservation. As part of this strategy, the Investing in Private Land Conservation Management Program Strategy 2023–2027 (BCT 2023c) sets out how the BCT is investing in private land conservation.

In 2024, the BCT ran a successful conservation tender in the Upper Hunter, creating at least 9 new permanently protected conservation agreements with guaranteed annual conservation management payments. Proposed future tenders include a fixed price offer planned for 2025–26 and 2026–27, targeting the highest priority NSW landscapes. A Cultural Biodiversity Conservation offer available to Aboriginal landholders is planned over 2025–26 and 2026–27, and a tender targeting threatened ecological communities and woodland birds is planned for 2026–27. These programs are expected to contribute to the Hunter Conservation Investment Strategy by working with landholders who want to establish a conservation agreement with the BCT that comes with annual conservation management payments.

When evaluating offers in the Hunter region, investment in private land conservation is typically targeted to land with high-quality vegetation (around 90% in moderate to good condition) and generally greater than 20 ha in size. Landholders can also apply for conservation agreements and entry-level agreements that don't come with guaranteed annual payments. In the Hunter region, private land conservation could be targeted at areas of high-quality vegetation outside of areas with potential to produce in-demand credits.

Addressing threats to biodiversity at a landscape level

Coordinating investment effort to address threats at a landscape scale could be a signature achievement of the Hunter Conservation Investment Strategy To address critical threats and protect important habitat resources, additional priorities to those identified in section 2 could include coordination of riparian and waterway restoration efforts, pest and weed control activities across existing conservation programs, including Local Land Services (LLS) and other government land managers. The Hunter Regional Pest Committee would be an ideal forum for developing specific, coordinated strategies to manage priority threats and targeting on-ground action that will benefit threatened species and ecological communities.

Threatened species conservation programs

The Department of Climate Change, Energy, the Environment and Water and other agencies manage various programs focusing on protecting and enhancing the viability of populations of threatened species and ecological communities. For example, the Saving our Species (SoS) program works with landholders, the community, non-government organisations and government partners to deliver projects across New South Wales including in the Hunter region. The program also delivers conservation actions relating to the offset obligations of the Biodiversity Conservation Fund and proponents.

Further investment in targeted recovery activities on-ground will be beneficial in the Hunter region. The SoS program could prioritise and support targeted recovery projects that will contribute to Hunter conservation priorities. As part of implementing this strategy, investment could be targeted towards threatened species in need of additional support to help secure the viability of populations within the Hunter region.

The Hunter LLS also works to deliver various programs supporting native flora and fauna recovery and conservation programs at the landscape scale. Investment in the conservation of native vegetation and terrestrial ecosystems is guided by the Natural Resource Management Plan 2023–28 (LLS 2022). Programs for threatened species and ecological communities are delivered in partnership with landholders and conservation organisations. The Australian Government is a key funding partner through the National Landcare Program. Partnerships with LLS could help expand and complement existing programs.

Koala populations in the Hunter priority investment area could be considered for investment through the soon-to-be revised Koala Strategy. Current actions under the Koala Strategy include improving mapping, supporting community engagement and student education, addressing vehicle strike, and funding habitat restoration and land acquisition. These priorities will be reviewed under the new Koala Strategy. Many of the priority actions of the Hunter Conservation Investment Strategy, such as improving connectivity and the expanding protected areas, would also support expansion and persistence of the regional koala population.

New BCT conservation agreements prioritise sites with threatened species habitat. For example, all 9 of the permanent agreements recently approved in the Upper Hunter protect threatened ecological communities, including 7 that protect critically endangered ecological communities.

3.2 New partnership opportunities

Aboriginal landowners and communities

The Hunter Conservation Investment Strategy could provide an opportunity for Aboriginal landowners, Local Aboriginal Land Councils and communities in the region. This could include participation in existing conservation programs as landowners, in implementing restoration and recovery actions, or as part of offsetting. The BCT's Cultural Biodiversity Conservation offer for Aboriginal landholders will run over the next 2 years. Further consultation with the Aboriginal community within the Hunter region would help to better identify ways in which the Hunter Conservation Investment Strategy could be adjusted to further outcomes sought by Aboriginal people.

Working with Aboriginal landholders and community could include:

- targeted work with Aboriginal landowners to maximise opportunities for Aboriginal landholders in private land conservation, including BSAs
- partnering with training and education institutions to develop the land restoration and land management workforce, including scholarships for Aboriginal people and funding for Aboriginal ranger programs
- engaging Aboriginal businesses on land management and recovery.

Investing in industry development to scale up restoration effort

For restoration to be possible at a landscape scale, it will be necessary to invest in the industry and skills to make this achievable. Organisations such as Landcare, Birdlife Australia and Greening Australia will be important, as will working with local training providers, and businesses that have the potential to provide on-ground delivery.

Scaling up the restoration industry could include:

- industry development programs for restoration including the supply chain
- establishing new nursery facilities, including to supply seed, plants and other materials needed for restoration (essential as part of offset delivery)
- partnering with training and education institutions to develop the land restoration and land management workforce.

Targeting support for landholders

A number of government and non-government organisations work with landholders to encourage activities that could contribute to Hunter region conservation priorities. For example, LLS works with landholders on feral animal and weed control, supported by the Australian Government's Natural Heritage Trust program. This includes a 5-year funding program for revegetation projects for regent honeyeaters and swift parrots on farms (LLS 2021). The Landcare network, connects landholders to opportunities to fund land management and conservation activities. Partnerships with other NGO networks that communicate opportunities about conservation to landholders could also be considered, as well as those supported by the Australian Government.

Working with NSW agencies, local government and the Commonwealth

The NSW Government holds land for a variety of operational, strategic and historic purposes. Other government entities, including state-owned corporations and local councils, also are responsible for public land management. There may be opportunities to increase conservation outcomes on these lands by working with other agencies, including establishing BSAs. Other Effective Area-based Conservation Measures (OECM) may also contribute to national conservation targets as outlined in the National OECM Framework. The interaction of OECMs with other strategy actions could also be explored.

Opportunities to seek support or partner with the Australian Government to implement the Hunter Conservation Investment Strategy could provide the basis of a partnership between the 2 levels of government. This could be in relation to Commonwealth offsets under the *Environment Protection and Biodiversity Conservation Act 1999*, conservation activities on Commonwealth land in the region, and the nature repair market as it becomes established.

There may also be opportunities to investigate partnerships in conservation projects within the Hunter region with the new National Parks and Wildlife Conservation Trust.

4. Reporting and review

4.1 Outcomes and progress reporting

Strategy outcomes and implementation progress will be reported publicly on an annual basis. Reporting across contributing programs will demonstrate progress at a regional level and help to measure performance against the strategy's objectives. Reporting will include key performance measures to measure progress, based on the conservation priorities identified in the Hunter Conservation Investment Strategy.

These reports are intended to deliver transparency by clearly reporting on the outcomes achieved with investment from biodiversity offsets and from other sources of conservation investment. The reports could include:

- investment in Hunter conservation priorities from relevant programs and initiatives
- conservation outcomes from those investments
- progress updates on work to build partnerships for delivery.

The reports could also build on natural capital accounting to ensure there is a consistent and repeatable method that also scales up to the reporting at the statewide level or in relation to other natural capital assets.

4.2 Review frequency

The Hunter Conservation Investment Strategy is proposed to be reviewed after one year to ensure effectiveness and that conservation priorities and implementation remains appropriate considering progress being made. Significant changes in policy or investment levels may also trigger a review of the strategy.

5. References

BCT (NSW Biodiversity Conservation Trust) (2023a) Comprehensive, Adequate and Representative protected area network data derived from NPWS Reserve Establishment CAR analysis (2022).

BCT (2023b) Koala habitat suitability index derived from DCCEEW NSW Koala Habitat Suitability Model 5m v1.1 (2019) developed under the NSW Koala Strategy.

BCT (2023c) *Investing in Private Land Conservation Management Program Strategy 2023–2027* (PDF 7.5MB), Biodiversity Conservation Trust, accessed 3 February 2025.

BCT (2023d) Threatened ecological communities (BCT) derived from DCCEEW (2023) *NSW State Vegetation Type Map* [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

Beaumont LJ, Baumgartner JB, Esperón-Rodríguez M and Nipperess D (2019) Identifying climate refugia for key species in New South Wales – final report from the BioNode of the NSW Adaptation Hub (PDF 8.5MB), Macquarie University, Sydney, AdaptNSW website.

Cth DCCEEW (Cth Department of Climate Change, Energy, the Environment and Water) (2024) *National Recovery Plan for the swift parrot (*Lathamus discolor*)*, Cth DCCEEW website, accessed 3 February 2025.

Cth DCCEEW (2016) *National recovery plan for the regent honeyeater (*Anthochaera phrygia), Cth DCCEEW website, accessed 3 February 2025.

DCCEEW (2024a) NARClim2.0 Hunter Climate Change Snapshot (PDF 8MB), Department of Climate Change, Energy, the Environment and Water, accessed 3 February 2025.

DCCEEW (2024b) Ecological condition of terrestrial habitat [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (2024c) Ecological connectivity of terrestrial habitat [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (2023a) NSW River Styles spatial dataset [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (2023b) *State Vegetation Type Map* [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (2022a) Future compositional dissimilarity grids (climate change impacts) 2010-2070 published as part of the Biodiversity Impacts and Adaptation Project (stage II) (2016) [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (2020) Conservation Values of NSW Travelling Stock Routes [data set], datasets.seed.nsw.gov.au, accessed 3 February 2025.

DCCEEW (unpublished) *Operational Response plan for Rhodamnia rubescens*, *Rhodomyrtus psidioides* and *Lenwebbia* sp. 'Main Range', Department of Climate Change, Energy, the Environment and Water, accessed 3 February 2025.

DECC (NSW Department of Environment and Climate Change) (2008) *New South Wales National Parks Establishment Plan 2008*, Environment and Heritage website, accessed 3 February 2025.

DECCW (NSW Department of Environment,Climate Change and Water) (2009) *Lower Hunter Regional Conservation Plan,* Department of Environment, Climate Change and Water, accessed 3 February 2025.

DPE (NSW Department of Planning and Environment) (2022a) *Hunter Regional Plan 2041*, Planning website, accessed 3 February 2025.

DPE (2022b) *NSW Koala Strategy: towards doubling the number of koalas in New South Wales by 2050*, Department of Planning and Environment, Environment and Heritage website, accessed 3 February 2025.

DPI (NSW Department of Planning and Infrastructure) (2012) Upper Hunter Strategic Regional Land Use Plan (PDF 3.2MB), Planning website, accessed 3 February 2025.

EnergyCo (2024) *Hunter-Central Coast Renewable Energy Zone*, EnergyCo website, accessed 3 February 2025.

LLS (Local Land Services) (2021) *Bringing back the regent honeyeater* (PDF 736KB), Local Land Services, accessed 3 February 2025.

LLS (2022) Hunter Region Natural Resource Management Plan 2023–2028 (PDF 15MB), Local Land Services, accessed 3 February 2025.

Macquarie University (2022–24) unpublished draft habitat suitability models.

OEH (Office of Environment and Heritage) (2018) *Biodiversity Conservation Investment Strategy 2018*, Environment and Heritage website, accessed 3 February 2025.

OEH (2022a) *Warkworth Sands Woodland in the Sydney Bioregion – profile,* Environment and Heritage website, accessed 3 February 2025.

OEH (2022b) *Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Bioregions – profile,* Environment and Heritage website, accessed 3 February 2025.

TSSC (NSW Threatened Species Scientific Committee) (2011) *Warkworth Sands Woodland in the Sydney Basin Bioregion – Determination to make a minor amendment to Part 3 of Schedule 1 of the Threatened Species Conservation Act*, final determination, Environment and Heritage website, accessed 3 February 2025.