



In partnership with
Wollongong City Council



NSW National Parks and Wildlife Service

Illawarra Escarpment Mountain Bike Strategy

**Illawarra Escarpment State Conservation
Area**



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1. Introduction

The NSW National Parks and Wildlife Service (NPWS) and Wollongong City Council (WCC) recognise the rapidly growing popularity of mountain biking as a recreational activity in the Illawarra Escarpment area. The significant economic, community, health and tourism advantages of mountain bike riding to the region are also recognised.

The *Illawarra Escarpment mountain bike strategy* (the strategy) is a joint NPWS and WCC response to the need for a sustainable approach to mountain biking in the Illawarra region. The Illawarra Escarpment is defined as land encompassing the Illawarra Escarpment State Conservation Area (IESCA) and other land tenures, including private landowners.

Many tracks in the area provide a good riding experience, however, the demands and impacts of this activity are increasing. The safety, environmental and cultural impacts and ad hoc track development need to be managed to ensure the activity is sustainable into the future.

This strategy will permit the activity within 2 defined areas: Network 1 – Mount Kembla and Network 2 – Balgownie. To formalise these networks, a range of works will be undertaken in accordance with environmental and cultural heritage approvals, and ongoing community and stakeholder engagement. These works include construction of new mountain bike tracks, incorporating some existing unsanctioned tracks into the network, and the closure and rehabilitation of specific unsanctioned tracks.

Network 1 – Mount Kembla is proposed as the first stage of works. Completion of both networks is forecast for 2024.

NPWS and WCC will be working jointly to deliver the *Illawarra Escarpment mountain bike strategy*. Implementation is subject to endorsement of this strategy by NPWS and WCC, environmental assessments under the NSW *Environmental Planning and Assessment Act 1979*, state and local government approvals, availability of resources and agreement with landholders within the networks.

NPWS has completed a statewide cycling framework that includes the *Cycling policy* (DPE 2022), *Cycling strategy* (NPWS 2022a) and *Guidelines for implementation: NSW Cycling strategy* (NPWS 2022b). Further, Wollongong City Council's *Cycling strategy 2030* (adopted in 2020), establishes council's vision to make Wollongong a cycling city. The *Illawarra Escarpment mountain bike strategy* is consistent with these documents.

The IESCA plan of management 2018 (the plan of management) (NPWS 2018) permits mountain bike riding where it is identified in an approved strategy. The *Illawarra Escarpment mountain bike strategy* is the approved strategy.

1.1 Purpose

The strategy details the background and methodology for creating a formalised mountain biking network on the IESCA. It also details the required assessment and approval processes, implementation and operational management framework of the mountain bike network.

This strategy has been developed to be a 'living document' and will be updated to address community and stakeholder feedback, the outcomes of environmental and cultural heritage assessments, design and operational requirements, and visitor expectations.

The *Draft Illawarra Escarpment mountain bike strategy* (the draft strategy) (NPWS and WCC 2018) was placed on public exhibition in October 2018, and over 950 submissions were

received. The community feedback guided key changes to inform the final strategy. One of the key changes was removing mountain bike tracks at Mount Keira from the strategy.

The Illawarra Escarpment has unsanctioned mountain bike tracks that have been developed without consent. In many locations, the development and continued use of these tracks has caused significant impacts to the cultural, historic and natural values of the IESCA. The unsanctioned tracks also pose an ongoing risk to public safety.

The strategy recognises:

- NPWS's statutory obligations to conserve natural and cultural values while providing for appropriate visitor experiences within the IESCA, consistent with the *National Parks and Wildlife Act 1974*
- the increasing demand, changes in equipment and desire for mountain biking experiences on the Illawarra Escarpment
- a joint approach by NPWS and WCC and the need for a coordinated and collaborative approach to planning and management of mountain biking on the Illawarra Escarpment
- working with land managers across a range of land tenures, neighbouring communities and local Aboriginal people and mountain bike riders is required for successful implementation.

1.2 Objectives

The objective of the strategy is to provide a sustainable mountain bike network that provides an alternative to the existing unsanctioned tracks across the Illawarra Escarpment. The tracks not included in the strategy would be closed and rehabilitated to protect the cultural, historic, natural and social values of the escarpment.

The strategy is consistent with the NPWS *Cycling strategy* and *Cycling policy*, which provide an overarching framework for cycling experiences in NPWS parks, and is underpinned by the following 7 objectives:

1. Protect and conserve park values

Ensure the placement of mountain bike infrastructure considers and protects areas of significant natural, cultural or social values.

2. Support community wellbeing and connection to nature

Provide mountain bike experiences to promote physical and mental wellbeing while enabling a connection to nature and culture.

3. Improve accessibility

Increase the number of inclusive mountain biking opportunities and reduce where possible the barriers to mountain bike experiences for people with disability.

4. Deliver coordinated and collaborative planning

Coordinate planning between NPWS and WCC and collaborate with cross-tenure land managers to provide mountain biking experiences.

5. Engage effectively with the community

Provide opportunities for stakeholders to be part of developing the mountain biking experiences and foster a culture of stewardship.

6. Promote nature tourism and enhance the visitor economy

Provide high-quality mountain bike experiences in nature that attract visitors and contribute to the economy.

7. Provide effective management and resourcing

Ensure mountain biking experiences are feasible and viable by using consistent and comprehensive assessments and evaluations. Develop consistent and firm strategies for non-compliance.

Further, WCC's *Cycling strategy 2030* is established on 5 pillars to ensure they are consistent with their goals to make Wollongong 'the place to ride', being:

1. Safe

We will invest in safe cycling infrastructure and educate our community on safe behaviour.

2. Convenient

We will prioritise infrastructure that supports convenient cycling as a sustainable and well-integrated mode of transport.

3. Planned

We will actively plan and implement strategies to improve cycling in Wollongong to facilitate increased participation in the future.

4. Business, tourism and events

We will promote and support cycling in Wollongong as a fun, attractive and sustainable way of life.

5. Innovation

We will actively engage in and support innovative solutions that inform and encourage greater participation in riding.

1.3 Project aims

The strategy aims to provide a safe, sustainable mountain bike network for a broad range of mountain bike riders on a variety of track types. The track network has been designed with consideration to the physical, environmental and cultural constraints identified by NPWS, WCC and stakeholder groups.

The track network comprises all levels of the International Mountain Bike Association (IMBA) track gradings, ensuring that the network can accommodate a broad range of rider skill levels. WCC is working with local communities to manage impacts of increased visitors to adjacent communities.

In working through the consultation phase of the project, respecting the cultural significance of Mount Kiera has become a key driver for the project. Mount Keira holds considerable cultural significance for the local Aboriginal community.

NPWS is committed to close and rehabilitate unsanctioned tracks on Mount Keira and within the IESCA that do not form part of the strategy.

The design of the proposed track network considers both existing and new riders, track connectivity, entry and exit points, separation of walkers and riders, the future direction that mountain biking will take due to technological advances, and the increasing popularity of the activity.

The construction of mountain bike tracks will only be undertaken when environmental planning assessments have been approved.

2. Background and project context

The Illawarra Escarpment presents a diverse range of environmental, heritage and geographical values and complexities. These include steep slopes, unstable soils, sensitive vegetation, native fauna habitat, Aboriginal cultural heritage values, complex land tenure boundaries and a history of community interest in conservation and recreation use.

In July 2015, in recognition of these issues, the then Minister for Environment endorsed a multi-agency stakeholder working group to investigate mountain bike opportunities on the Illawarra Escarpment. The draft strategy was developed in consultation with this group.

Following the feedback from the public exhibition of the draft strategy in 2018, an advisory group was formed. The advisory group provided input to address the growing mountain biking demand, to help protect environmental and cultural values, and to manage conflicts with other users by guiding the sustainable development and use of an approved single-track network.

The strategy has been developed with input from the working and advisory groups and stakeholder consultation, including public exhibition of the draft strategy and draft review of environmental factors.

The following documents have informed this strategy:

- Illawarra Escarpment mountain bike feasibility study (Dirt Art November 2017)
- Illawarra Escarpment State Conservation Area plan of management (NPWS 2018)
- the draft 2018 Illawarra Escarpment mountain bike concept plan (Dirt Art November 2018)
- Draft Illawarra Escarpment mountain bike strategy (NPWS and WCC 2018)
- Illawarra Escarpment mountain bike strategy public exhibition report (NPWS 2019)
- the 2020 Illawarra Escarpment mountain bike concept plan (Synergy 2020)
- Illawarra Escarpment mountain bike project: draft review of environmental factors (NPWS 2022c, including specialist reports)
- Illawarra Escarpment mountain bike concept plan engagement report (WCC 2021)
- Aboriginal cultural heritage report (NHE 2022a)
- Historic heritage assessment (NHE 2022b)
- Transport assessment Illawarra Escarpment mountain bike trail project (ARC Traffic & Transport July 2022).

The above reports, specialist constraint mapping, land tenure mapping and community engagement provided the necessary data to define the location of 2 networks within the Illawarra Escarpment: Network 1 – Mount Kembla and Network 2 – Balgownie.

Network 1 will consist of 51 km of tracks, and Network 2 will have 25 km of tracks, giving a total 76 km of track network. Network 1 and Network 2 are geographically separate and not connected. The networks will consist of a combination of upgraded existing tracks and new tracks. Both locations will provide for a wide range of rider skill and ability, along with providing both ascending and descending single-use (cyclists only) alignments.

2.1 IESCA plan of management values & management directions

The IESCA plan of management identifies the key values of the Illawarra Escarpment as:

- biological
- landscape
- cultural heritage
- recreational, research and educational
- water quality.

The IESCA has significant values but also several management challenges. The plan of management identifies the following directions to manage these challenges:

- protect the natural character, biodiversity and scenic qualities of the park
- improve the connectivity of the sections of the park and connectivity of the park to other conservation reserves
- seek holistic management of the escarpment across land tenures to protect its important values
- conserve significant cultural heritage features and facilitate ongoing use of suitable sites
- provide for sustainable use that is compatible with the park's values and management purposes, integrated with facilities located on adjacent lands
- recognise and respond to the proximity of urban populations, minimise conflict between park users and engage with new user groups
- promote understanding and appreciation of the park's natural and cultural values, support for conservation and minimal impact by visitor use and behaviour.

These values and management directions have been considered in the strategy.

2.2 Opportunities and partnerships

NPWS and WCC will explore partnerships to deliver visitor experiences and services that complement the mountain bike track network. Examples of these may include guardianship agreements for the track network, transfer services, equipment hire, and food and drink provision for users.

Establishment of these opportunities is subject to finalisation of planning for supporting facilities in collaboration and consultation with key stakeholders and local communities.

NPWS and WCC will manage the number of partnerships issued for any tourism-related services through fair and transparent competitive expression of interest (EOI) processes.

NPWS has undertaken market research to identify visitor demand for a range of additional services and experiences linked to the mountain bike track network. The findings of the research identify the project will generate substantial positive economic and community benefits for the Wollongong region with flow-on opportunities in accommodation, transport, food service and bicycle-related retail and services businesses.

2.3 Engaging stakeholders and consultation

The development of the strategy has involved a broad range of collaboration and consultation. This has been essential given the complexities of the proposal in a multi-tenure and sensitive environment.

The working group established in 2015 included representatives from NPWS, WCC, Destination Wollongong, Illawarra Mountain Bike Alliance, and University of Wollongong.

The Illawarra Mountain Bike Advisory Group (advisory group) established in 2019 is ongoing and includes representatives from the following organisations:

- Destination Sydney Surround South
- Destination Wollongong
- Illawarra Escarpment Alliance
- Illawarra Local Aboriginal Land Council
- Illawarra MTB Alliance
- National Parks and Wildlife Service
- National Parks Association
- Office of Sport
- South32
- Sydney Water
- Trail Care
- WaterNSW
- Wollongong City Council
- a community representative.

NPWS and WCC will continue to engage with communities of Mount Kembla, Kembla Heights, Balgownie and Tarrawanna communities, along with key user and interest groups throughout the implementation of the strategy.

The local Aboriginal community, including the Illawarra Local Aboriginal Land Council, have been consulted at different stages during the preparation of the strategy. NPWS have engaged with the Aboriginal community in undertaking an Aboriginal cultural heritage assessment and cultural values assessment, and a number of registered Aboriginal parties were involved in survey work.

The significant Aboriginal cultural values of the Illawarra Escarpment are acknowledged, and NPWS and WCC are committed to ongoing consultation and involvement with the Aboriginal community in the delivery of the strategy.

3. Approvals and legislation

3.1 Assessment and approvals

Plan of management

The IESCA plan of management (NPWS 2018) enables NPWS to deliver the proposed mountain bike network within the park in accordance with an approved strategy. This strategy will satisfy that requirement. The networks contained in the strategy may be subject to adjustments based on outcomes of environmental and cultural heritage assessments.

Planning assessments

Implementation of the strategy is permissible under the *Environmental Planning and Assessment Act 1979* (EP&A) and the *Wollongong Local Environmental Plan 2009* subject to approval. The mountain bike network and supporting infrastructure will be assessed under the EP&A Act in 2 separate components:

Mountain bike tracks on NPWS land will be assessed under Part 5 of the EP&A Act through a review of environmental factors (REF) process.

Supporting infrastructure and mountain bike tracks on other land will follow a planning assessment process either under Part 4 or Part 5 of the EP&A Act.

3.2 Legislation and policy

Legislation, planning instruments and policies that affect implementation of the strategy include, but not limited to:

- National Parks and Wildlife Act 1974
- Heritage Act 1977
- Environmental Planning and Assessment Act 1979
- Biodiversity Conservation Act 2016
- Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)
- Wollongong Local Environmental Plan 2009
- State Environmental Planning Policy (Infrastructure) 2007
- Plan of management Illawarra Escarpment State Conservation Area (NPWS 2018)
- Cycling policy (NPWS 2018)
- Crown Land Management Act 2018
- Local Government Act 1993.

4. The Illawarra Escarpment mountain bike strategy network

The strategy track network will consist of 76 km of tracks at Mount Kembla and Balgownie (Figure 1). A number of existing unsanctioned tracks are proposed to be upgraded and incorporated into the network to minimise environmental impacts.

The existing tracks that will be incorporated into the network require modification to meet the IMBA track standards as set out in the *Australian mountain bike trail guidelines* (MTBA 2019). The proposed upgrades would result in improved drainage and erosion control, safety and reduced edge impacts.

Unsanctioned tracks that do not form part of the network will be closed and rehabilitated. Each land manager is responsible for closing and rehabilitating unsanctioned tracks on their land.

NPWS will close and rehabilitate unsanctioned tracks in the IESCA, including Mount Keira.

Tracks will be single-use (cyclists only) and separated from walking tracks. Fly overs will be incorporated where mountain bike track – walking track intersections are unavoidable. Signage will be installed to communicate track designation.

4.1 Network 1 – Mount Kembla

Network 1 at Mount Kembla (Figure 2) is located to the west of the Wollongong suburbs of Figtree and Cordeaux Heights and south-west of Mount Keira. The Mount Kembla network is 51 km in total length, across multiple land tenures. The majority of tracks are located within the IESCA, managed by NPWS. Other land tenures within the Mount Kembla network include private landholders and Wollongong City Council.

The network includes a combination of new and existing (unsanctioned) tracks. Approximately 40% of the network will be upgraded unsanctioned tracks, and 60% will comprise new tracks being built to form the network.

Subject to planning and project funding, WCC will provide off-park supporting infrastructure as part of the delivery of the project, including traffic management, parking and toilet amenities.

4.2 Network 2 – Balgownie

Network 2 at Balgownie (Figure 3) is located to the north of the Wollongong suburbs of Balgownie, with Tarrawanna and Fernhill to the east and bordering Corrimal to the north. Network 2 will provide 25 km of sanctioned tracks.

The majority of the tracks are located in the IESCA, managed by NPWS. Other land tenure within the Balgownie network includes a WCC-managed Crown land allotment in the southern portion of the network. The former Corrimal mine site is located centrally within the proposed network, however, no part of the network is located within the land holding or bisecting access.

Tracks in this area will include a full range of rider abilities using a combination of descending and ascending tracks that will be accessed via a primary trailhead in the area of Foothills Road near the memorial site. Selected areas of the existing unsanctioned 'Possums' tracks and jumps that are deemed unsafe will be removed or modified and incorporated into the network. All unsanctioned trails will be closed and rehabilitated.

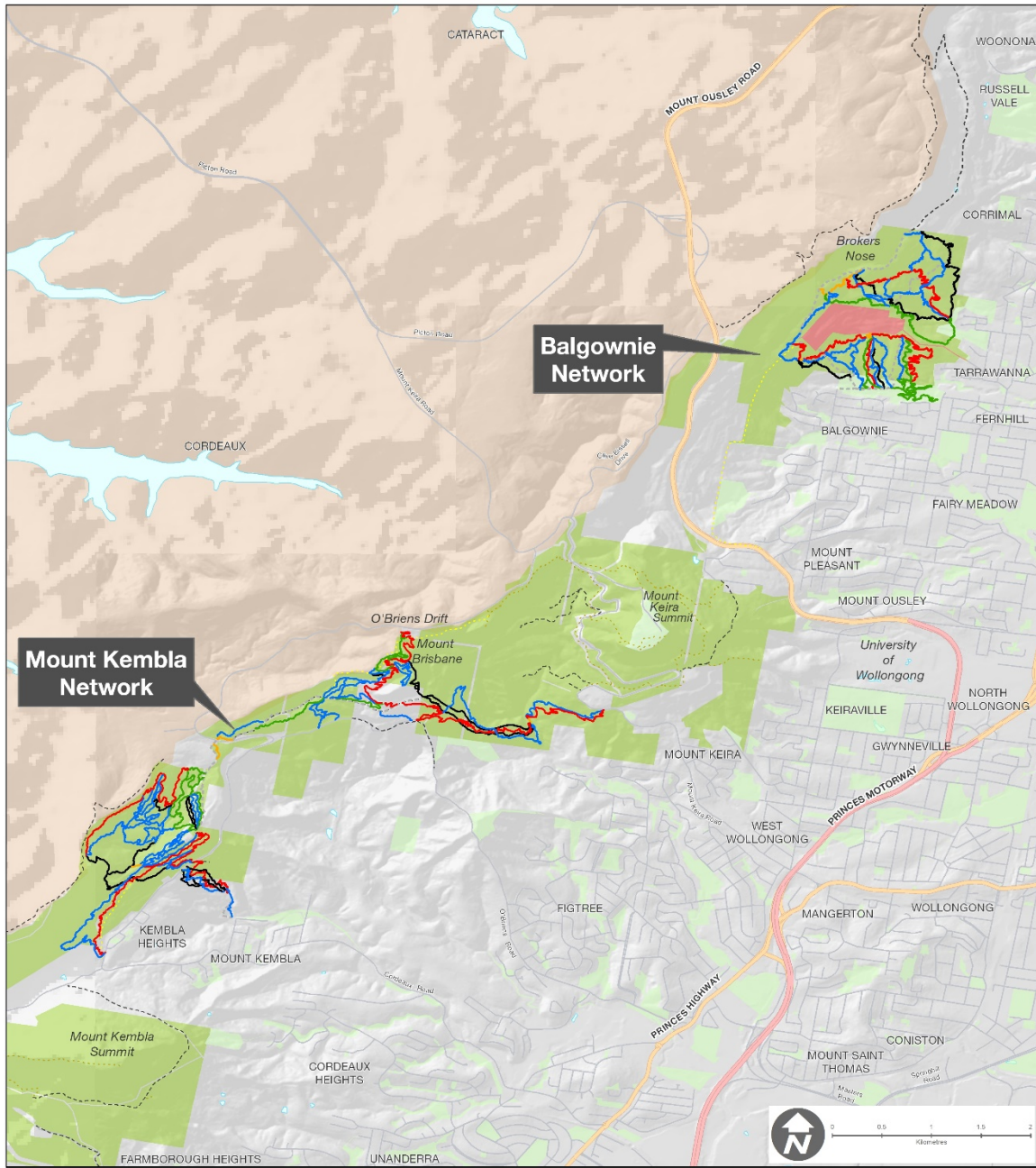
Subject to planning and project funding, WCC will provide off-park supporting infrastructure as part of the delivery of the project, including traffic management, parking and toilet amenities.



Photo 1 View from Mount Kembla Lookout in the Illawarra Escarpment State Conservation Area. Nick Cubbin/DPE



Illawarra Escarpment Mountain Bike Strategy



- | | | |
|--|--|---------------------------|
| Illawarra Escarpment State Conservation Area | Proposed for Mountain Biking
beginner (GREEN) | Walking Track
existing |
| Wollongong City Council Tenure | intermediate (BLUE) | proposed |
| Sydney Drinking Water Catchment | advanced (BLACK) | |
| Waterbody | ascending | |
| Private Land – Under Conservation Agreement | two-way | |
| Major Road | | |
| Primary Road | | |
| Local Road | | |
| Management Road | | |

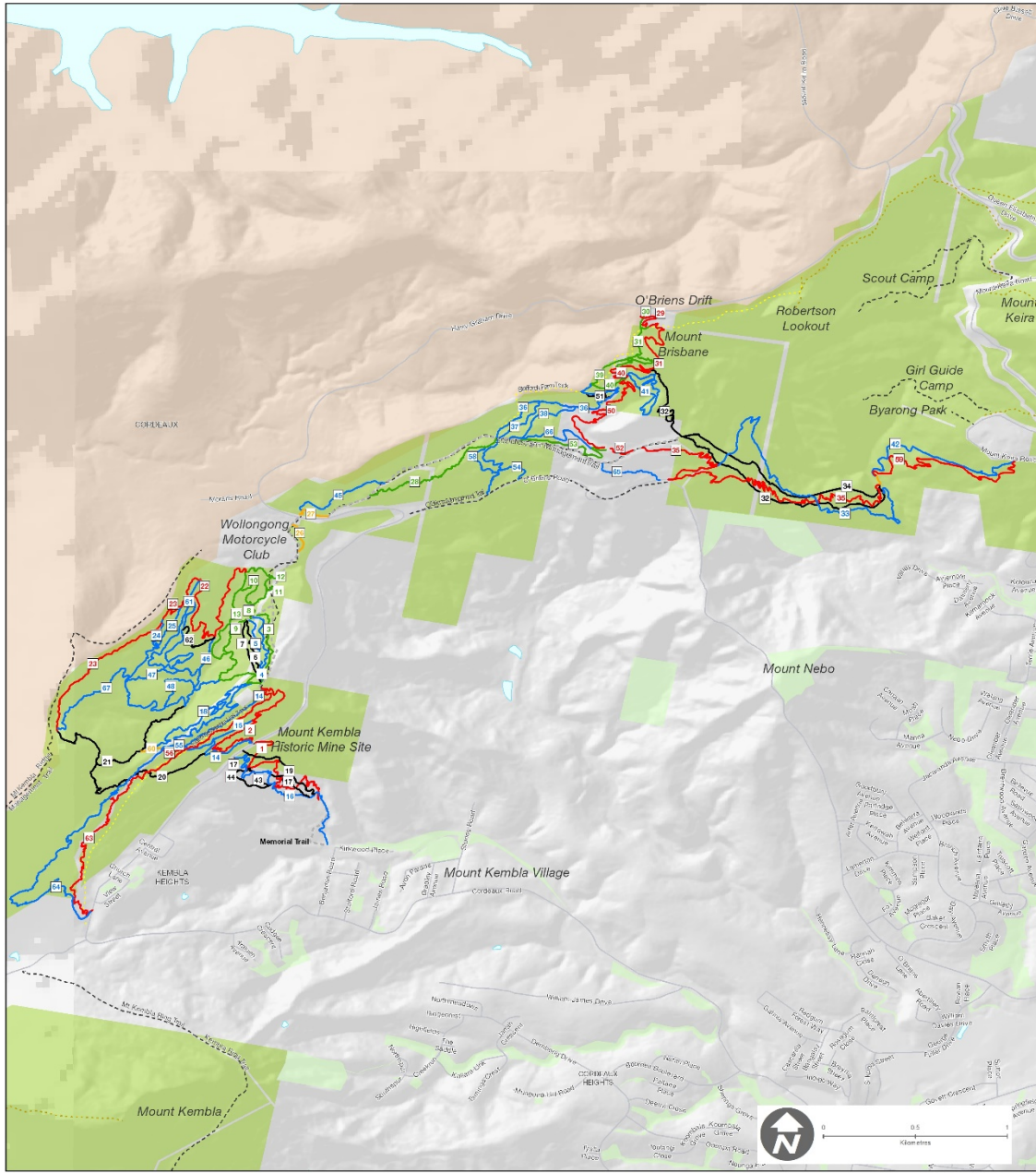


Figure 1 Network overview map – Illawarra Escarpment

(Note: Mapping indicative and subject to change)



Illawarra Escarpment Mountain Bike Strategy



- | | | |
|--|--|---|
| <ul style="list-style-type: none"> Illawarra Escarpment State Conservation Area Wollongong City Council Tenure Sydney Drinking Water Catchment Waterbody Local Road Management Road | <p>Proposed for Mountain Biking</p> <ul style="list-style-type: none"> trail reference number beginner (GREEN) intermediate (BLUE) advanced (BLACK) ascending two-way access trail | <p>Walking Track</p> <ul style="list-style-type: none"> existing proposed |
|--|--|---|

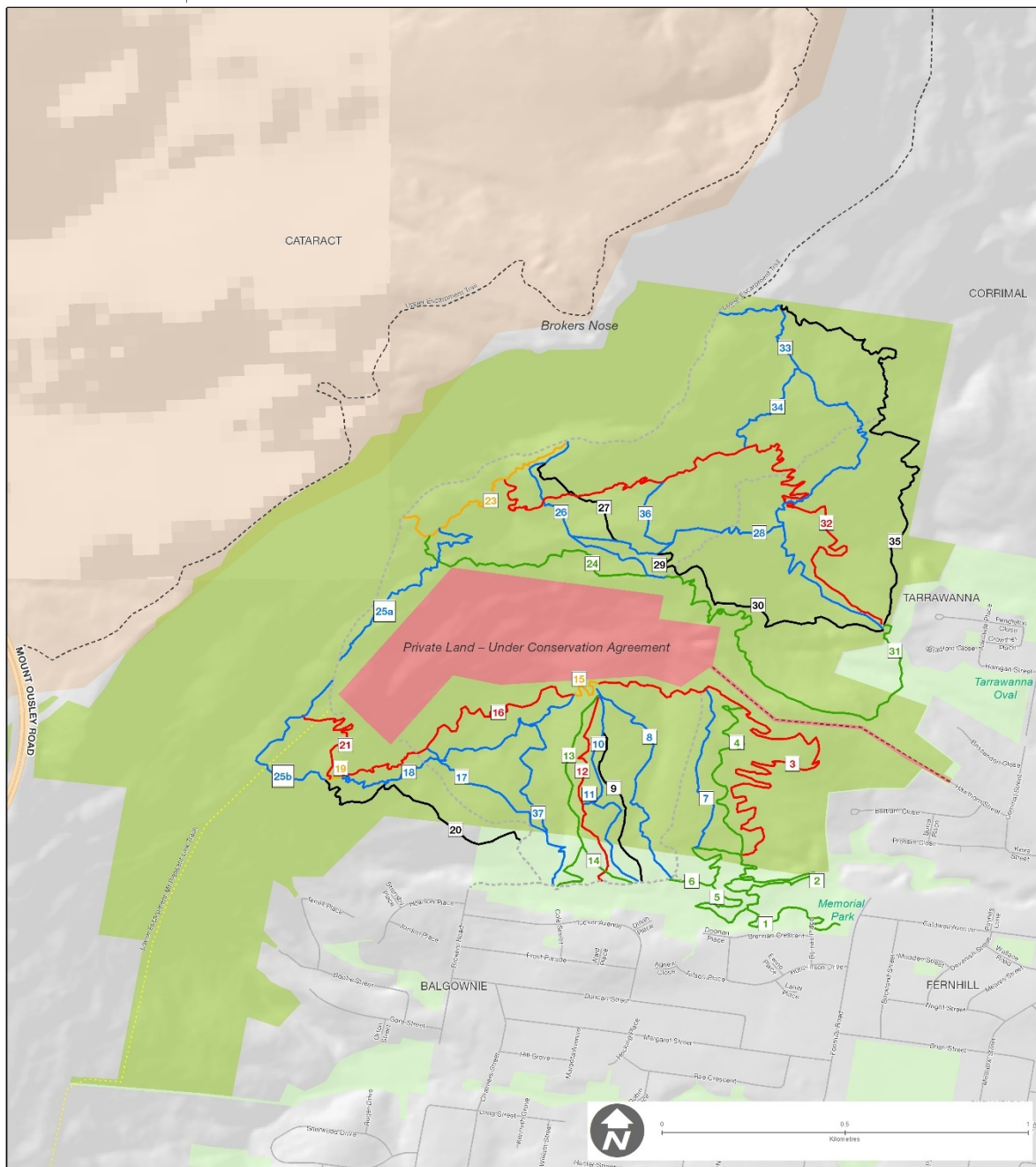


Figure 2 Illawarra Escarpment Network 1 – Mount Kembla

(Notes: Mapping indicative and subject to change. Trail numbers on the map relate to trail identification numbers in Appendix 1 of the Synergy 2020 mountain bike concept plan.)



Illawarra Escarpment Mountain Bike Strategy



- | | | |
|--|-------------------------------------|----------------------|
| Illawarra Escarpment State Conservation Area | Proposed for Mountain Biking | Walking Track |
| Wollongong City Council Tenure | trail reference number | proposed |
| Sydney Drinking Water Catchment | beginner (GREEN) | |
| Private Land – Under Conservation Agreement | intermediate (BLUE) | |
| Primary Road | advanced (BLACK) | |
| Local Road | ascending | |
| Management Road | two-way | |
| | access trail | |



Figure 3 Illawarra Escarpment Network 2 – Balgownie

(Notes: Mapping indicative and subject to change. Track numbers on the map relate to trail identification numbers in Appendix 1 of the Synergy 2020 mountain bike concept plan.)

5. Network establishment

5.1 Site selection and construction

The construction of the track network has been guided by extensive investigations and informed by specialist advice and consultation.

Routes were chosen to provide sustainable, safe, high-quality single track experiences for a diversity of riders, minimising adverse impacts on the community, cultural and natural values.

The selection and assessment of sites was based on:

- environmental sustainability – including maximising use of existing tracks where feasible
- protection of native plants, animals and habitats
- protection of heritage and cultural values – including special consideration for areas of tangible and intangible Aboriginal cultural values
- providing safe and enjoyable experiences for all park visitors
- topography and ability to provide a network to cater for a variety of skill levels and interests
- street-level access to the networks and impacts on local communities
- provision of appropriate facilities such as amenities and parking
- long-term management and maintenance of tracks
- land ownership and zoning.

The construction and maintenance of the mountain bike track network will be carried out in accordance with Mountain Bike Australia's track standards / trail guidelines (MTBA 2019). The approaches for construction and maintenance of tracks will vary depending on cultural and environmental sensitivities.

Track construction will be staged, based on land tenure and approvals. Works are expected to commence on Network 1 in 2023, with remaining works on Network 1 and Network 2 to be completed in 2024.

The closure and rehabilitation of unsanctioned mountain bike tracks will commence in 2023.

5.2 Supporting infrastructure

WCC will be the lead agency to provide off-park supporting infrastructure, while NPWS will deliver on-park infrastructure based on community engagement outcomes and network requirements. Delivery of supporting infrastructure will be staged to meet the demands of the network.

Supporting infrastructure may include:

- traffic calming interventions (where deemed appropriate)
- parking
- toilet facilities
- footpaths
- vehicle turnaround bays
- emergency vehicle access points (in consultation with Emergency Services).

Specialist reports will be prepared to inform appropriate supporting infrastructure. These reports will include:

- rehabilitation plan for unsanctioned tracks
- social impact assessment
- mountain bike network demand analysis
- traffic impact assessment plans
- Kembla Heights community precinct plan.

5.3 Unsanctioned track closure and rehabilitation

The closure and rehabilitation of unsanctioned mountain bike tracks located in the IESCA will be done in accordance with rehabilitation plans developed by NPWS. The closure of mountain bike tracks that are located outside of the IESCA is the responsibility of the land manager.

The development of a rehabilitation plan and subsequent closure of the mountain bike tracks in the IESCA at Mount Keira is a priority and will progressively occur when new sanctioned tracks that are part of the sustainable mountain bike network are completed.

NPWS will close and rehabilitate all unsanctioned mountain bike tracks in the IESCA.

Closure and rehabilitation of unsanctioned tracks in the IESCA may include a combination of:

- techniques for rehabilitating the areas in focus (e.g. direct seeding)
- removal of structures
- erosion and sediment management
- signage and fencing
- designated zones for weed and biodiversity management
- cost-effective vegetation and threatened species management
- inspection and maintenance of rehabilitation areas.

5.4 Accessibility

Opportunities for inclusive and accessible mountain bike experiences will be considered in the design of tracks. Where there are opportunities to provide accessible mountain biking, the track design and facilities will consider the *Australian adaptive mountain biking guidelines* (Break the Boundary 2018).

Detailed information, including signage, trail classification and grading will be available to enable people to determine whether a particular experience is suitable for them. Proposals for carparking at key entry and locations will consider accessibility. Where accessible tracks are established, final classification and grading of accessible tracks will be undertaken post-construction, with signage and content to be reflective of its availability.

Any new ancillary facilities, for example, carparks, toilets and amenities, will be established in accordance with accessibility and inclusion design standard.

5.5 Signage

Wayfinding signage for tracks within the IESCA will be installed in accordance with NPWS Park Signage Manual. Wayfinding signage is a key identifier for separation of mountain bike tracks and walking tracks, and critical for emergency services response.

The network provides an opportunity for education of the significant values of the Illawarra Escarpment, including cultural heritage. Interpretation signage at key landmarks across the network (including ecological, cultural and historical) will be established. There are also opportunities for interpretation through track naming. Ongoing consultation will be undertaken to ensure signage content is consistent and appropriate. Wayfinding and track naming signage will be maintained to ensure rider information can be easily interpreted. Emergency Service track markers are to be incorporated and scheduled for regular inspection.

5.6 Operation and monitoring

NPWS and WCC will further explore what operational management models are most relevant to the Illawarra Escarpment mountain bike tracks.

In respect to ongoing management and maintenance of the networks, there are common approaches that other land management agencies in Australia have used for the management of mountain bike tracks, for example:

- **the land manager** – where the development and maintenance of the mountain bike tracks are done by the legal authority responsible for the land
- **the land manager and volunteer groups** – where the land manager establishes the mountain bike tracks and maintenance is shared between the land manager and volunteer groups, such as a mountain bike association
- **a memorandum of understanding (MOU) between land managers** – where responsibilities for a mountain bike network that goes across multiple land tenures is achieved through a single vision.

NPWS, with off-park support from WCC, will work together to encourage sustainable mountain practices through signage and education, including riders:

- ensuring cycling equipment is cleaned before and after riding to mitigate spread of weeds and pathogens
- remaining on the sanctioned tracks and within the riding corridor to mitigate track widening
- avoiding riding after wet weather
- being aware of walkers and native fauna
- avoiding night riding to mitigate impacts to nocturnal animals.

The maintenance of mountain bike tracks can be resource intensive. NPWS, with the support of WCC, will develop volunteer partnerships with mountain bike clubs that are interested in having an active role in mountain bike track maintenance and the operational oversight of the tracks, including monitoring.

An operational management plan will be developed for the mountain bike network. The plan will include an asset inspection and maintenance regime, monitoring the impacts of the number of riders on the mountain bike tracks, and monitoring the closure of tracks when required due to wet weather or other events.

The specific roles and responsibilities of NPWS, WCC, partners and volunteers will be detailed further within the operational management plan.

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More information

- [Illawarra Escarpment Mountain Bike Project](#) – NPWS project webpage
- [Wollongong Local Environment Plan 2009](#)