



# Draft Illawarra Escarpment Mountain Bike Strategy

A joint project between National Parks and Wildlife Service and Wollongong City Council



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Cover photo: Mount Keira, Illawarra Escarpment State Conservation Area (Dan Irwin)

## **Acknowledgments**

The NSW National Parks and Wildlife Service (NPWS) AND Wollongong City Council (WCC) acknowledges that the Illawarra Escarpment State Conservation Area is in the traditional country of the Wodi Wodi Aboriginal People of the Dharawal language group.

NPWS and WCC recognise that the escarpment, named Merrigong, has great symbolic and historical importance for local Aboriginal people, who have a continuing association with the area.

NPWS and WCC would like to thank the NSW Department of Premier and Cabinet, Destination Wollongong, the Illawarra Mountain Bike Alliance, the University of Wollongong, and local Aboriginal representatives for their assistance in developing the draft strategy.

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## Invitation to comment

The public, either as individuals or as members of community interest groups, are invited to comment on this draft strategy. Submissions should be in writing and be as detailed and specific as possible, however, any comments are welcome.

Comments should be forwarded to:

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The closing date for comments on the plan is **21 December 2018**.

All submissions received by the Office of Environment and Heritage (OEH) are a matter of public record and are available for public inspection upon request to the OEH. Your comments on this draft strategy may contain information that is defined as personal information under the NSW *Privacy and Personal Information Protection Act 1998*. The submission of personal information with your comments is voluntary.

## Project overview

The NSW Government recognises the rapidly growing popularity of mountain biking as a recreational activity. The significant economic, community, health and tourism advantages of mountain bike riding to the region are also recognised. This draft strategy is a Government response to the need for sustainable mountain biking in the Illawarra Region.

Mountain biking occurs on the escarpment both legally and illegally. Many trails provide a good riding experience, but their condition and sustainability vary greatly. The demands and impacts of this activity on the escarpment are increasing. The adverse safety, environmental and cultural impacts of illegal use and ad-hoc trail development need to be addressed to ensure the activity is sustainable into the future.

This draft strategy aims to ensure that future track construction is undertaken in a way that is sensitive to the environmental and cultural heritage of the area. It also addresses the need to close informal trails that cause damage to the environment or pose a safety concern. In 2018, National Parks and Wildlife Service (NPWS) commissioned mountain bike trail planning and design firm Dirt Art to assist with the development of an Illawarra Escarpment Mountain Bike Concept Plan to address the growing demand, help protect environmental and cultural values and avoid conflicts with other users by guiding the sustainable development and use of approved trails.

The Illawarra Escarpment spans public and private lands in the Wollongong, Shellharbour and Kiama local government areas (LGA). The draft strategy investigates proposed mountain bike trails on public lands within the Wollongong LGA. Future development of the trails may warrant investigation of opportunities on other land.

The primary emphasis of the strategy is safe sustainable recreation for a broad range of riders. The draft strategy identifies a total potential mountain bike trail network of 82 kilometres on the escarpment, with up to 37 kilometres proposed for short-term construction.

Implementation is subject to adoption of the draft strategy, environmental assessment under the NSW *Environmental Planning and Assessment Act 1979*, state and local government approvals and availability of resources.

Plans of management for the Illawarra Escarpment State Conservation Area (IESCA) and Mount Keira Summit Park will identify mountain riding in accordance with the mountain bike strategy as a permissible activity.

## Community engagement for the project

A Working Group was established in 2015 to investigate mountain bike opportunities on the Illawarra Escarpment. The group includes representatives from Wollongong City Council, Destination Wollongong, Illawarra Mountain Bike Alliance, University of Wollongong and NPWS. The Working Group provided advice on the Illawarra Escarpment Mountain Bike Feasibility Study that council commissioned in 2017. Representatives from state and local government, tourism bodies, mountain biking groups and land managers have provided initial input to the strategy.

The strategy introduces the concept of mountain biking in the Illawarra Area and provides a base to begin the conversation with Aboriginal people and the broader community about the proposal.

## Planning context

### Background

Mountain biking is a rapidly growing recreational activity in New South Wales. The Illawarra Escarpment's physical features, elevation, scenic outlook, varied terrain and peri-urban location have made it the focus of intensifying mountain bike activity. Currently, cycling in the Illawarra Escarpment State Conservation Area (the park) is only permitted on formal management roads and is prohibited on single trails. There are no authorised single mountain bike trails in the park.

The Illawarra escarpment is a refuge for the region's unique biodiversity, including rare species and plant communities, and species that are reliant on its natural habitats. It has important Aboriginal and non-indigenous culture heritage values and is listed on the register of the National Trust as a scenic landscape of statewide significance. Many of these values have a low tolerance for disturbance and are threatened by human activities. The landform is also naturally prone to extreme erosion, weed infestations and mass movement. Large areas are not usable due to land stability hazards.

The impacts of unregulated mountain bike use are an emerging threat to safety, heritage, the environment and other values. There are opportunities to address the growing demands and impacts of mountain bike use on the escarpment through properly designed, constructed and managed trails.

In 2017, Wollongong Council's *Illawarra Mountain Bike Feasibility Study* identified potential mountain biking opportunities for further investigation. The desktop study was informed by constraints mapping, using information from environmental studies, and input from riders and other stakeholders. Opportunities in areas not controlled by NPWS or the Council were considered but not investigated further.

Following the Feasibility Study, NPWS engaged the mountain bike trail planning and design firm Dirt Art to help prepare an Illawarra Escarpment Mountain Concept Plan. The plan was informed by environmental studies, field investigations and input from the council, the Illawarra Mountain Bike Alliance, Destination Wollongong and other stakeholders.

The Illawarra Escarpment Mountain Bike Concept Plan developed by Dirt Art, NPWS and Wollongong City Council (WCC) informed the draft Illawarra Mountain Bike Strategy. The

strategy is consistent with the NPWS Cycling Policy and the NPWS Sustainable Mountain Bike Strategy, which support mountain biking in NPWS parks where regional planning identifies a high demand for new experiences.

The draft strategy proposes trails across cross-country and gravity riding styles to suit all rider skill levels. It identifies opportunities for formal mountain bike trails to be developed in three localities (Mount Keira, Mount Kembla and Balgownie). Mountain biking in the Illawarra affects multiple tenures, so a cross-tenure, whole-of-government approach was adopted.

## Planning needs

The growing demand and the impacts of mountain bike use on the escarpment have been considered in this planning process.

Poorly designed user-built tracks are significantly more dangerous for riders than tracks designed specifically for mountain biking and sometimes lead to conflict with other park visitors.

The impacts on native vegetation, drainage and soils are cumulative on already high levels of disturbance from other activities such as mining, roads and power lines. The threats from habitat loss, landslip, erosion and the spread of weeds, are long-lasting and difficult and costly to manage.

Illegal trails cause damage to the park, pose a risk to public safety, and can conflict with other user groups. The draft strategy has attempted to formalise use existing illegal mountain bike trails where appropriate, to reduce the impact on the park. NPWS will close illegal mountain bike trails not identified in the final strategy.

Over 30 kilometres of unsealed management roads on the escarpment are available for mountain bike use. However, it is acknowledged that single-track is desirable because it allows more intimate experiences of the setting, a better connection between the rider and the environment and relatively high levels of technical challenge at relatively low speeds, which reduces the actual risk.

Existing demand is also focussed on areas near urban centres. Providing quality single tracks close to Wollongong's main centres is one way to reduce illegal mountain biking and track creation and promote stewardship of the environment among riders.

## Site selection

Investigations were guided by information from environmental studies and input from state and local government, mountain bike and tourism organisations and other stakeholders.

The selection and assessment of sites were based on:

- environmental sustainability – including consideration of erosion
- protection of native plants and animals
- protection of heritage and cultural values – including special consideration for areas of Aboriginal significance
- providing a safe and enjoyable experience for all park visitors
- the needs of riders
- street level impact of access to the Illawarra Escarpment for mountain biking
- provision of appropriate facilities such as amenities and parking
- long-term management and maintenance of trails
- land ownership

- land zoning
- cost
- economic benefit

Trail alignments that utilise and enhance existing trails or disturbance and avoid known environmental and safety constraints were preferred. Steep terrain, areas with extreme soil erosion potential, lands prone to flooding or slope instability, poorly conserved, rare, threatened or regionally important plant communities and riparian corridors were avoided.

Rider criteria included:

- improved connectivity between existing trails
- improved access, parking and amenities
- linking key landmarks and points of interest
- purpose-built beginner trails that focus on fun free-flowing rides
- structured trailheads and intersections to allow simple navigation
- multiple long-distance riding and loop options
- iconic descending trails
- maximum use of available elevation.

Criteria from other visitor and tourism groups included opportunities to develop regional tourism, foster stewardship of the environment and avoid conflicts with other existing or potential uses.

Five localities (Austinmer, Bulli, Balgownie, Mount Keira and Mount Kembla) were investigated. The draft strategy proposes formal trails in three (Balgownie, Mount Keira and Mount Kembla).

Public lands at Austinmer and Bulli offer limited scope for trail development at the current time due to their small area and environmental constraints.

Routes were chosen to provide sustainable, safe, high-quality single-track experiences for a diversity of riders without adverse impacts on the community, the environment or other values.

## **Illawarra mountain bike concept**

The draft concept provides a range of trails, including enduro, back country/wilderness trail riding, beginner-friendly trails, and downhill riding segments, which feedback from riders (Dirt Art 2017) identified as desirable to meet existing and potential demand.

A total network of approximately 82 kilometres in three localities (Balgownie, Mount Keira and Mount Brisbane-Mount Kembla) is identified. Implementation in three stages (short, medium and long-term) is proposed, with up to 37 kilometres of trails during Stage 1.

The concept follows International Mountain Bicycling Association (IMBA) track standards for design, construction and maintenance. Average gradients of trails are less than ten percent and, except for the shared use of part of the western leg of the Mount Keira Ring Track as a climbing trail, alignments maintain separation between riders and other visitors.

Parking and access are dispersed throughout the network to provide a range of entry and exit points, to avoid concentrated use and maintain a sense of remoteness in a natural environment.

The trail plan for each locality is illustrated in Maps 2 to 4. How the mountain bike trail network functions and its implementation is described below.



## **Mount Keira (Map 2)**

This proposed trail offers proximity to Wollongong's main urban areas, good access, large elevation range and iconic views, which are the most desirable attributes from a mountain biking perspective.

Proposed trails aim to suit beginner and intermediate abilities. On Mount Keira, a beginner's loop at the summit, a range of beginner-intermediate grade descending trails from the summit to Geordies Flat and a climbing route on the western flank of the mountain are identified.

Extended rides south to Mount Kembla are also proposed.

Primary access and on Mount Keira summit, with other access nodes at Byarong Park, Geordies Flat, at the intersection of Mount Keira Road with Queen Elizabeth Drive and along Harry Graham Drive.

Opportunities to extend the network to Keiraville are also identified.

## **Mount Kembla – Mount Brisbane (Map 3)**

Mount Kembla and Mount Brisbane are popular riding destinations. Each offers good elevation and opportunities for extended rides, including a gradual descent to Mount Kembla village.

Proposed trails form a long loop extending from Mount Brisbane south to Mount Kembla and a link north to Mount Keira. They provide a longer duration ride with a 'backcountry' feel. The loop includes a wide variety of trail types, with some stunning views east to Wollongong.

Trails are suited to intermediate-advanced levels.

Potential parking and access occurs at several locations along Harry Graham Drive. These include O'Briens Drift, the former Mount Kembla mine and Mount Kembla village.

## **Balgownie (Map 4)**

Balgownie offers an existing network of predominantly descending trails is currently popular with riders.

Proposed trails include a beginner-intermediate descending trail to Tarrawanna, an intermediate level loop above the former Corrimal mine and intermediate-advanced descents to Balgownie.

A beginner-level climb will give access from the parking at Tarrawanna Oval to the start of the descending trails on the Lower Escarpment fire trail.

Presently there aren't viable links to Mount Keira, so Balgownie would be an isolated local network.

# Implementation

## Construction stages

Trails have been prioritised for delivery over three stages. Stages reflect the need to progressively monitor use and impacts and consult with stakeholders.

### Stage 1 (short-term)

- Trails within NPWS and council tenures at Mount Keira and Mount Brisbane-Mount Kembla that are identified in Table 1.
- Provides trails for all abilities, including beginners, and establishes the Illawarra as a mountain bike destination.
- Features loop and point-to-point riding options, including a round-the-mountain ride and descending and climbing trails from Mount Keira summit to Geordies Flat and south to Mount Brisbane-Mount Kembla.
- No formal links to urban area. Planning for formal links to urban areas to be undertaken in future stages.
- Refer to Maps 2 and 3 and Table 1 below.

**Table 1 Stage 1 trails**

Map	Map reference	Difficulty	Length (km)	Total km
2	K1	Green Circle	1	19.1
	K2	Blue Square	1.2	
	K3	Blue Square	1.1	
	K4	Blue Square	4.6	
	K6	Green Circle	1.8	
	K14	Green Circle	2.3	
	K15	Blue Square	2.3	
	K16	Blue Square	2	
	K17	Blue Square	1.6	
	K19	Blue Square	1.2	
3	KB1	Blue Square	2.9	18.1
	KB2	Blue Square	2.4	
	KB3	Blue Square	6.2	
	KB4	Blue Square	1.6	
	KB5	Blue Square	3.8	
	KB6	Blue Square	1.2	
<b>Total</b>				<b>37.2</b>

### Stage 2 (medium to long-term)

- Offers potential for network expansion within lands managed by NPWS and council.
- Increases trail volume and ride length by adding trails at Mount Keira and Balgownie.
- Improves network diversity and potential connectivity to local streets and amenities.
- Enhances appeal for riders, especially visitors, to encourage a longer stay.

Refer to Maps 2, 3 and 4 and in Table 2 below.

**Table 2 Stage 2 trails**

Map	Map reference	Difficulty	Length (km)	Total km
2	K9	Green Circle	3.7	11.1
	K10	Blue Square	3.2	
	K11	Black Diamond	2.4	
	K12	Black Diamond	0.7	
	K13	Black Diamond	0.5	
	K18	Blue Square	0.6	
3	Existing - Mt Kembla	Various	2.7	2.7
4	B1	Green Circle	3.7	12.2
	B2	Blue Square	2.2	
	B3	Blue Square	1.9	
	B5	Green Circle	2.4	
	Existing- Balgownie	Various	2	
<b>Total</b>				<b>26</b>

### Stage 3 (long-term)

Stage 3 identifies opportunities to broaden variety and improve connectivity with urban areas if additional lands transfer to public ownership or under agreements with landowners. Refer to Maps 2, 3 and 4 and Table 3 below

**Table 3 Stage 3 trails**

Map	Map reference	Difficulty	Length (km)	Total km
2	K5	Blue Square	2	8.5
	K7	Green Circle	3.4	
	K8	Green Circle	3.1	
3	KB7	Green Circle	3.2	3.2
4	B4	Green Circle	2.2	7.4
	B6	Black Diamond	2	
	B7	Black Diamond	0.4	
	B8	Black Diamond	2.2	
	B9	Black Diamond	0.6	
<b>Total</b>				<b>19.1</b>

Enhancement of disturbance adjacent to approved trails areas and the closure and regeneration unsustainable trails will be progressed in each stage of the project.

## Relevant legislation and policy

Legislation, planning instruments and policies that affect implementation of the strategy include:

- *National Parks and Wildlife Act 1974* (NSW)
- *National Parks and Wildlife Regulation 2009* (NSW)
- *Environmental Planning and Assessment Act 1979* (NSW)
- *Biodiversity Conservation Act 2016* (NSW)
- *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth)
- Wollongong Local Environmental Plan 2009
- State Environmental Planning Policy (Infrastructure) 2007
- Illawarra Escarpment Strategic Management Plan (Wollongong City Council 2015)
- Mount Keira Summit Park Vision (Wollongong City Council 2016)
- Plan of Management Illawarra Escarpment State Conservation Area (NPWS 2018)
- Cycling in Parks Policy (NPWS 2018)
- Sustainable Mountain Bike Strategy (NPWS 2011).

## Management

The management of mountain bike trails is constantly evolving.

There are common approaches that other land management agencies in Australia have used for the management of mountain bike trails:

- **The land manager:** where the development and maintenance of the mountain bike trails are done by the legal authority responsible for the land.
- **The land manager and volunteer groups:** where the land manager sets up the mountain bike trails and maintenance is shared between the land manager and volunteer groups, such as a mountain bike association.
- **A Memorandum of Understanding (MOU) between NPWS and Wollongong City Council:** where responsibilities for the mountain bike network that goes across different land tenures is achieved through a single vision.

Management models where more formal agreements between agencies and interest groups exist include:

- **A lease agreement:** where the land manager develops the mountain bike trail network and leases it to a private business for its ongoing management.
- **An incorporated association or trust:** with a membership of different organisations and interest groups that is responsible for maintaining the mountain bike trail network, on a volunteer or in-kind basis.

Other management models for mountain bike trails exist, however they are more appropriate for private land where companies are developed to manage the trail network and distribute profits to members.

NPWS and Wollongong City Council will further explore what management models are most relevant to the Illawarra Escarpment.



## What's next?

After considering public submissions, a final strategy will be prepared and adopted. Detailed construction plans are to be developed. All proposed technical track features within the park will be assessed against criteria identified in the NPWS Cycling Policy.

Approval through NPWS' and the council's plan of management processes, environmental impact assessments and other approvals are required to implement the strategy. Proposals in NPWS parks can only be approved where the values of the park would not be diminished.

Implementing the strategy will depend on the availability of resources to provide and maintain the approved trails. This may be a formal agreement process and may include a combination of management models.

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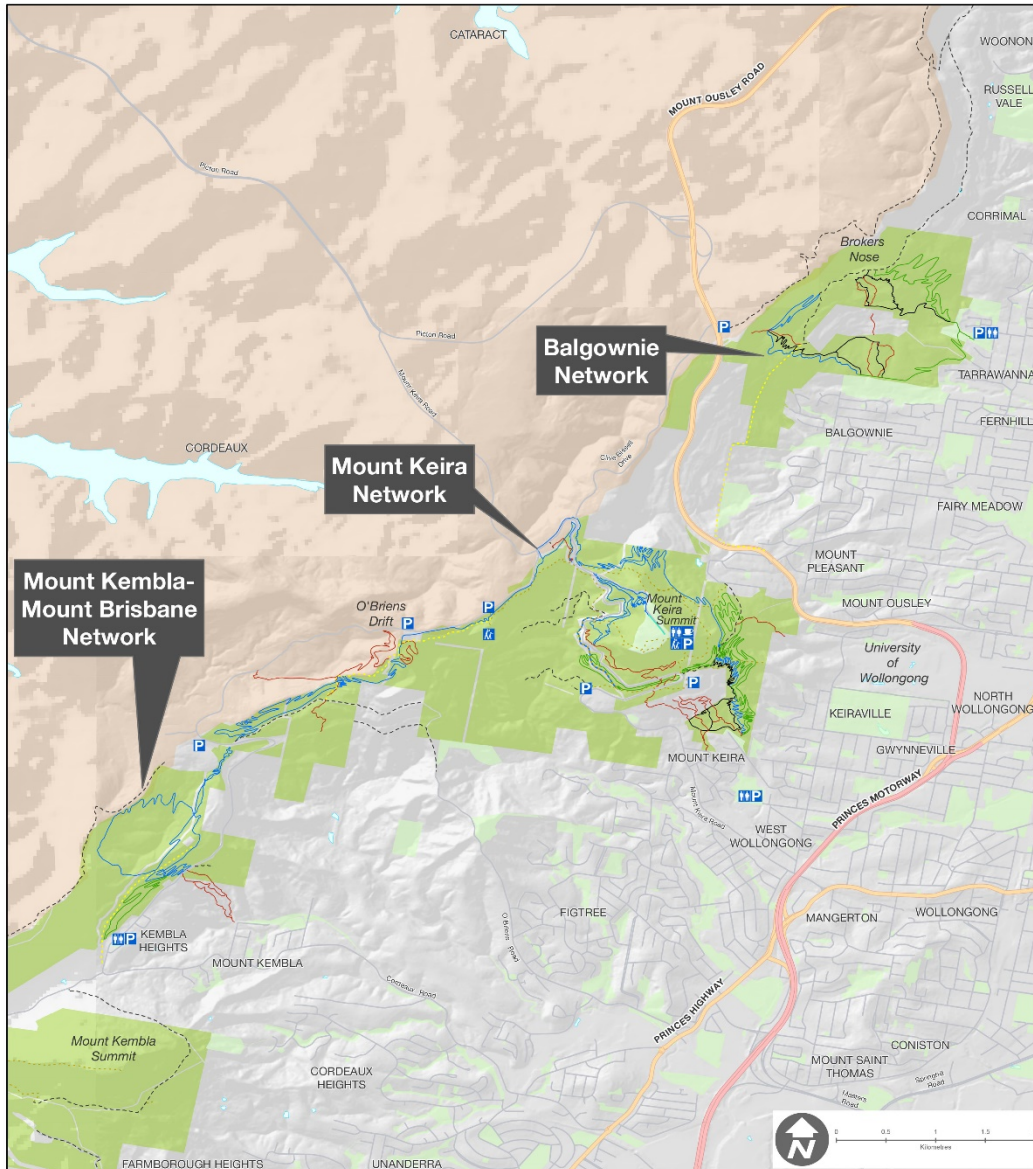
# Appendices

These maps do not provide detailed information on topography and landscape and may not be suitable for some activities.

## Map 1 Overview map



### Draft Illawarra Escarpment Mountain Bike Strategy



- Illawarra Escarpment State Conservation Area
- Wollongong City Council Tenure
- Sydney Drinking Water Catchment
- Waterbody
- Major Road
- Primary Road
- Local Road
- - - Management Road

- Proposed for Mountain Biking
- beginner (GREEN)
- intermediate (BLUE)
- advanced (BLACK)
- close and rehabilitate

- Link
- Walking Track
- existing track for shared use
- proposed

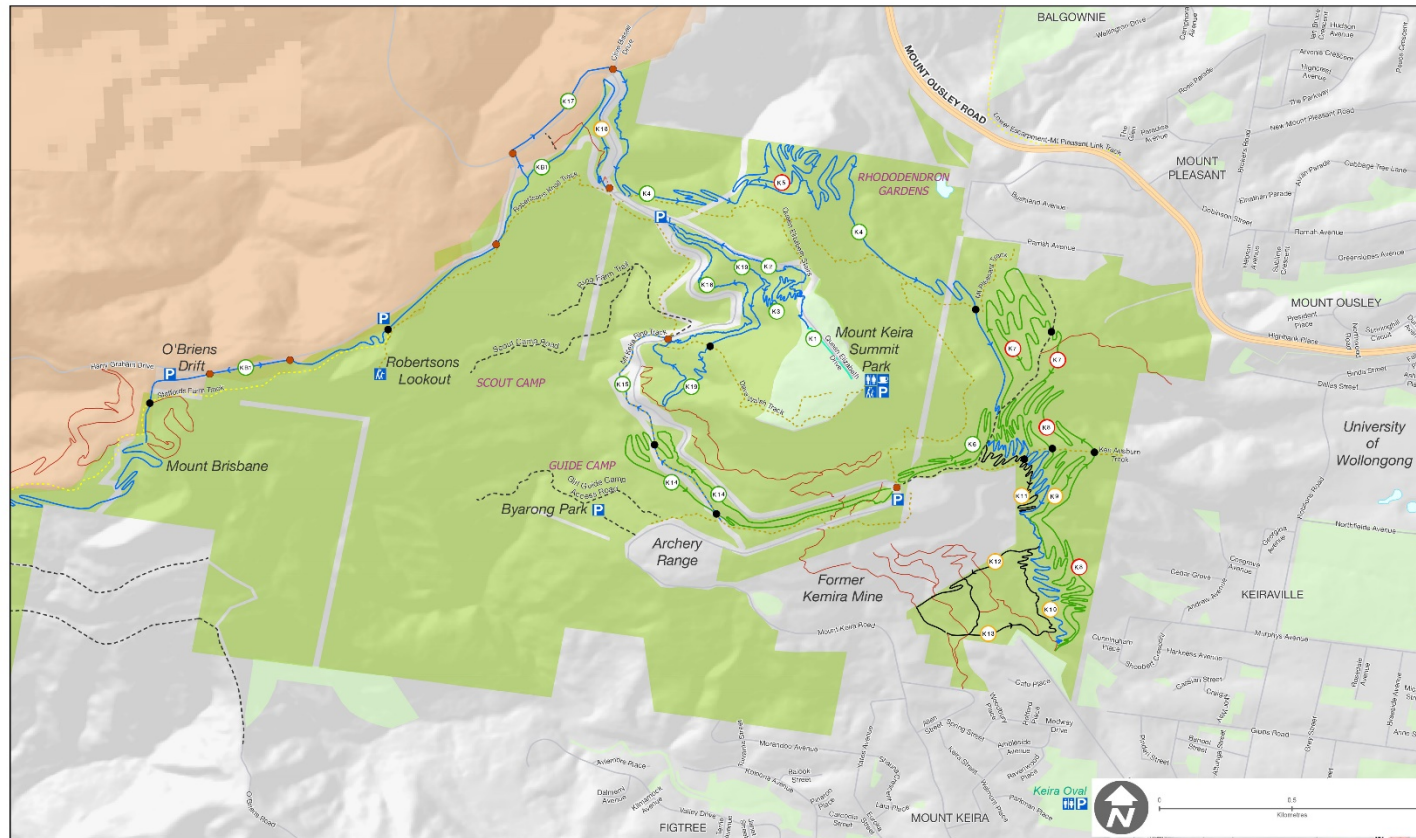
- Amenities
- Food & Beverage
- Parking
- Lookout



## Map 2 Mount Keira



### Draft Illawarra Escarpment Mountain Bike Strategy



- Illawarra Escarpment State Conservation Area
- Wollongong City Council Tenure
- Sydney Drinking Water Catchment
- Waterbody
- Primary Road
- Local Road
- - - Management Road

- Proposed for Mountain Biking
- beginner (GREEN)
  - intermediate (BLUE)
  - advanced (BLACK)
  - close and rehabilitate

- Crossings road
- walking track
- 11 Stage 1 with trail number
- 12 Stage 2 with trail number
- 13 Stage 3 with trail number

- Link
- Walking Track
- existing
- existing track for shared use
- proposed

- Amenities
- Food & Beverage
- Parking
- Lookout

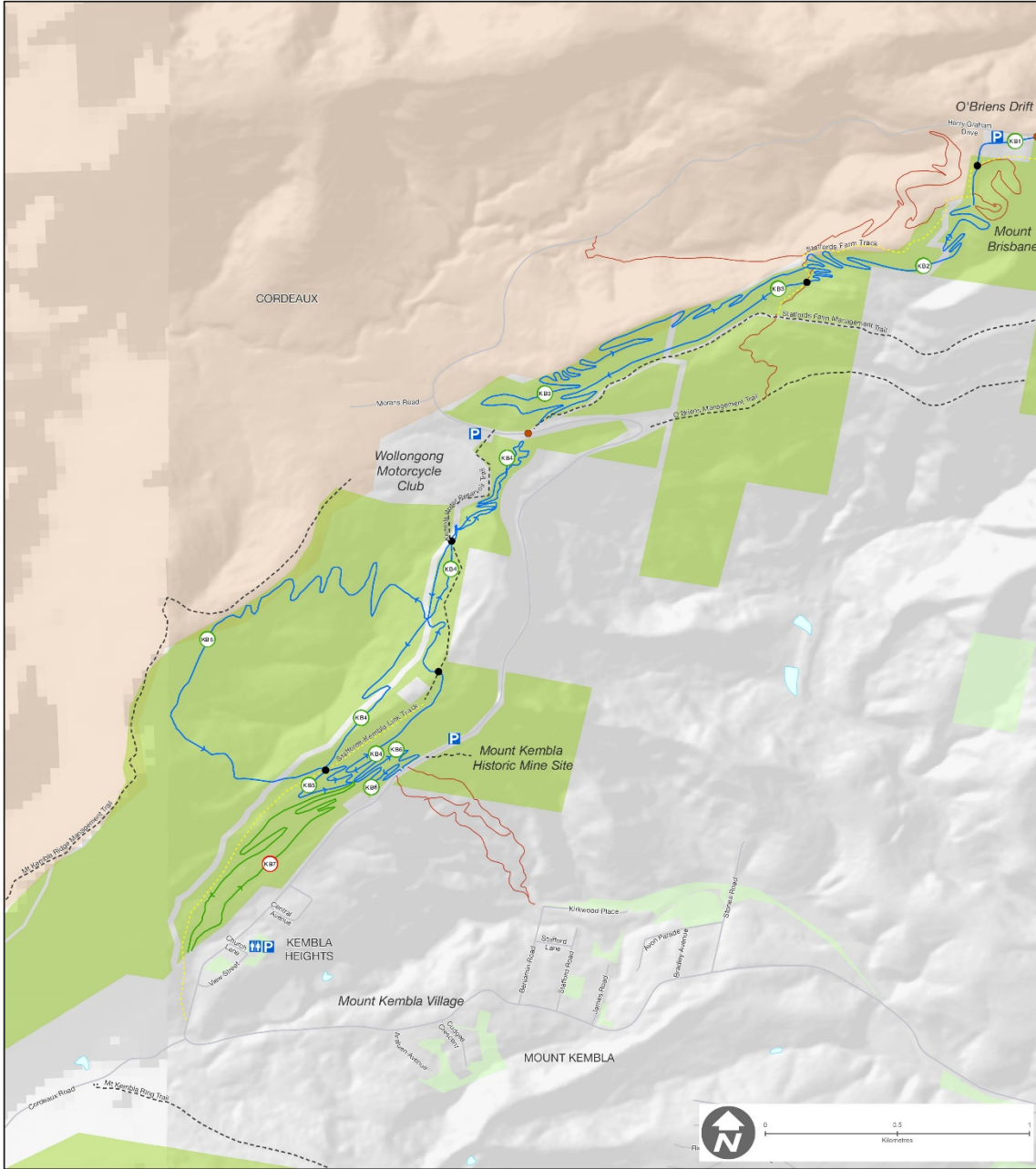




### Map 3 Mount Kembla to Mount Brisbane



## Draft Illawarra Escarpment Mountain Bike Strategy



- Illawarra Escarpment State Conservation Area
- Wollongong City Council Tenure
- Sydney Drinking Water Catchment
- Waterbody
- Local Road
- Management Road

- Proposed for Mountain Biking
- beginner (GREEN)
- intermediate (BLUE)
- close and rehabilitate
- Crossings
- road
- walking track
- K1B Stage 1 with trail number
- K1C Stage 3 with trail number

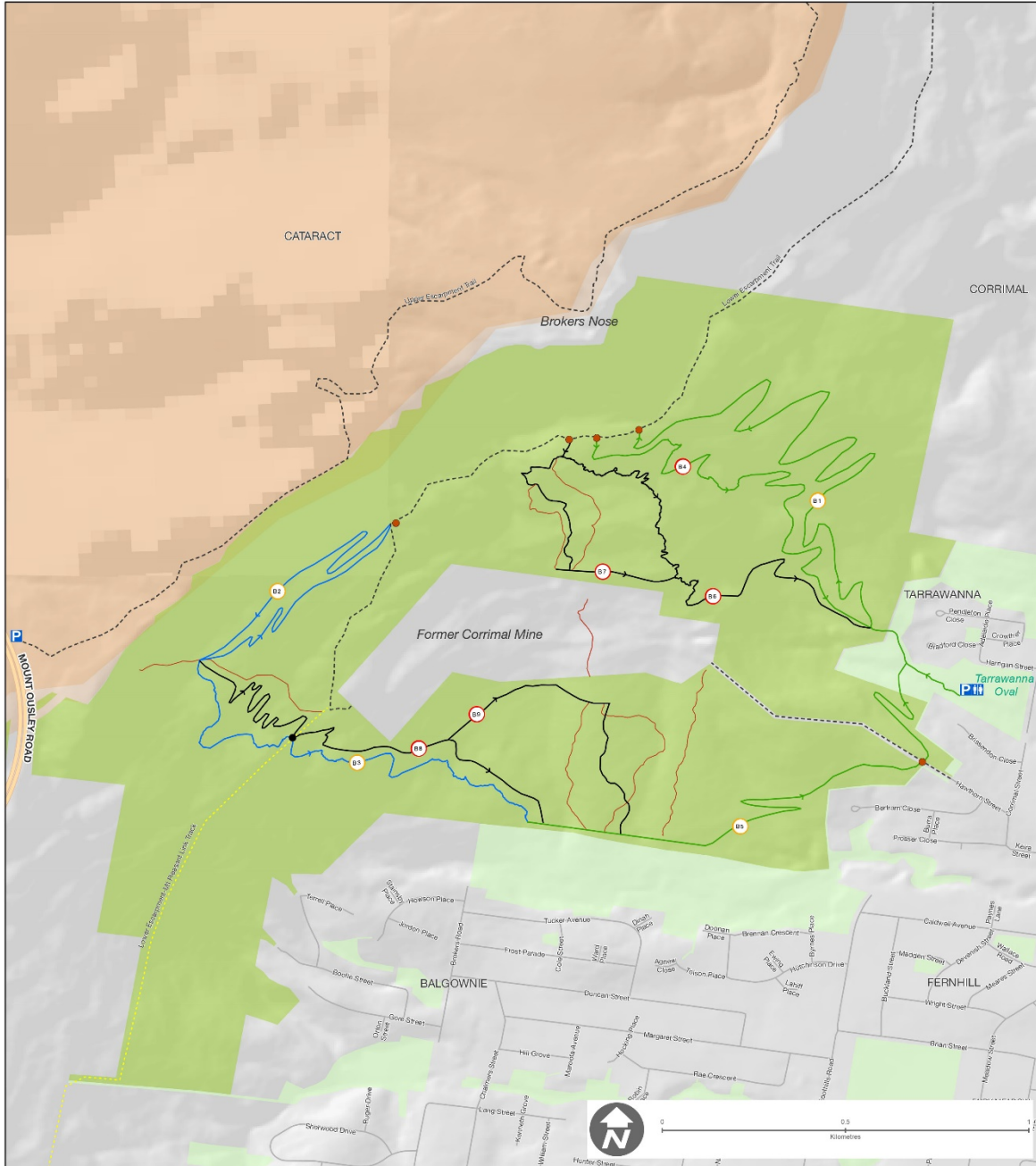
- Walking Track
- proposed
- Amenities
- Parking



# Map 4 Balgownie



## Draft Illawarra Escarpment Mountain Bike Strategy



- Illawarra Escarpment State Conservation Area
- Wollongong City Council Tenure
- Sydney Drinking Water Catchment
- Primary Road
- Local Road
- Management Road

- Proposed for Mountain Biking**
- beginner (GREEN)
  - intermediate (BLUE)
  - advanced (BLACK)
  - close and rehabilitate
- Crossings**
- road
  - walking track

- Walking Track**
- proposed
  - Amenities
  - Parking

Stage 2 with trail number

Stage 3 with trail number

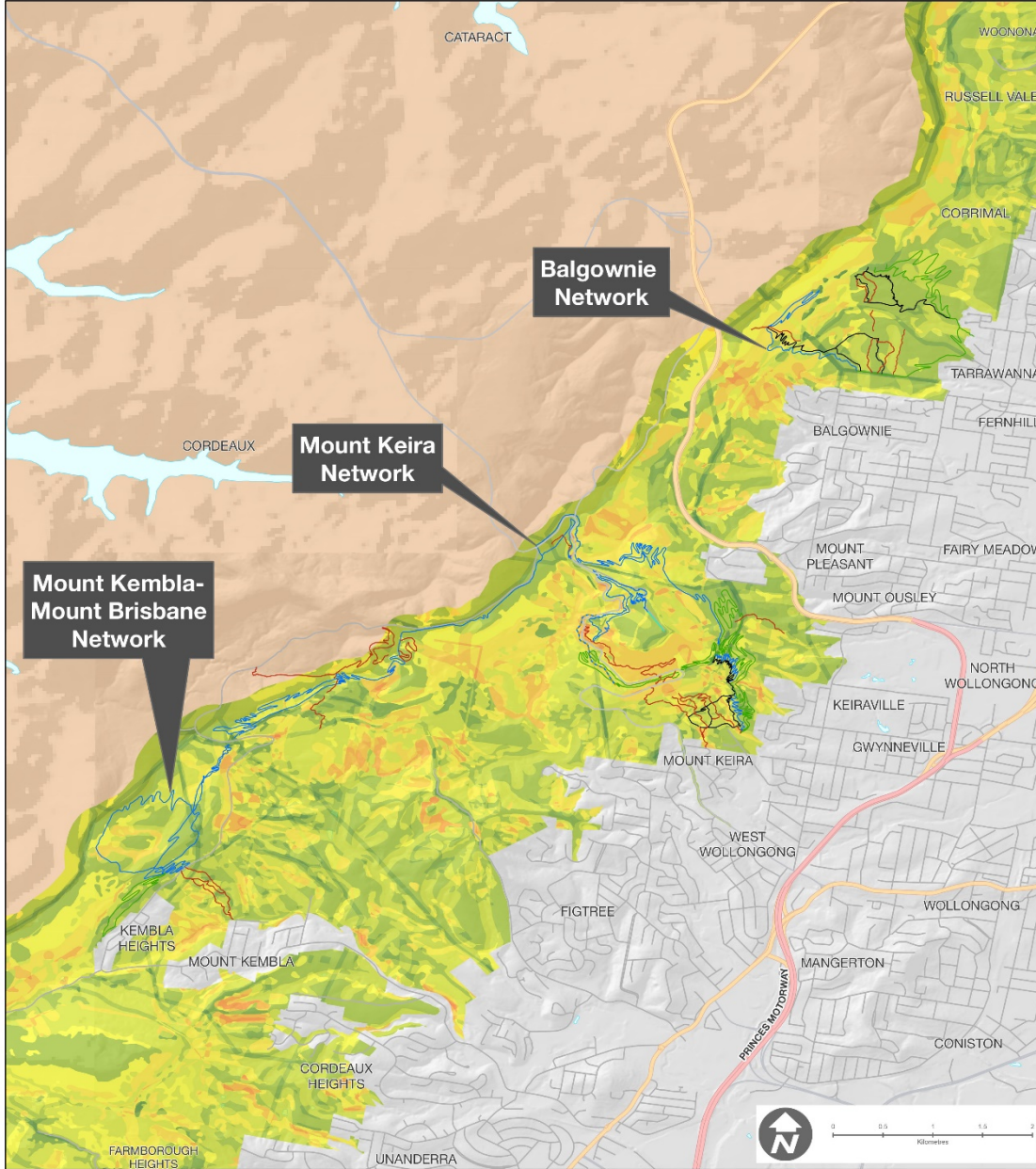




# Map 5 Environmental constraints



## Draft Illawarra Escarpment Mountain Bike Strategy



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Environmental Constraints Analysis Results

(Lowest Constraint Value) (Highest Constraint Value)

