



**Outdoors
NSW & ACT**

**Recreational Trail
& Adventure Riding in NSW**

Trail Bike Sub-Committee Outdoors NSW & ACT



BACKGROUND

Outdoors NSW & ACT (ONSWACT) is the peak body for all outdoor recreation, education, and adventure tourism activities within NSW and ACT. Established in 1984, the legal entity known as Outdoors Recreational Industry Council of NSW Incorporated, trading as Outdoors NSW & ACT. Subcommittees can be formed to conduct business that meet the objectives of the organisation. The Trail Bike Committee was established on 18 August 2020 at the Outdoors NSW & ACT Annual General Meeting.

Members are;

Martin Burney	Chairman of Outdoors NSW & ACT
Lori Modde	CEO of Outdoors NSW & ACT
Colin Robinson	The Office of Sport NSW
Steve Donkers	Representative from the Motorcycle Council of NSW Trail Bike Sub-Committee
Brian Wood	Representative from the Motorcycle Council of NSW Trail Bike Sub-Committee
Rhys Griffiths	Federal Chamber of Automotive Industries
Michael Hill	Forestry Corp NSW

This document is intended to highlight the challenges of the activity in NSW and inform stakeholders to create opportunities for collaborative discussion on favourable outcomes.

The intended audiences are policymakers, landowners and managers, stakeholders in the industry, and participants in the activity.

EXECUTIVE SUMMARY	5
DISCUSSION POINTS	6
WHAT IS RECREATIONAL TRAIL & ADVENTURE RIDING?	6
MOTORCYCLE COMPETITION	7
HEALTH AND SOCIAL BENEFITS OF SPORT	8
BUILDING RELATIONSHIPS WITH STAKEHOLDERS	10
TYPES OF BIKES	11
ELECTRIFICATION	12
WHERE PEOPLE RIDE	13
ORGANISED EVENTS	14
DIRECT COMMUNITY ECONOMIC BENEFITS	16
GENERAL ENVIRONMENTAL CONCERNS	17
ILLEGAL TRAILS	18
EROSION	19
SINGLE TRACK	20
NOISE	22
LOSS OF RIDING AREA	24
CONFLICT WITH OTHER OUTDOOR ACTIVITIES, WALKERS, CYCLISTS, 4WDS, HORSE RIDERS ETC.	25
UNLOADING AREAS	26
TRESPASS ON PRIVATE AND PUBLIC LANDS	27
TRAIL RIDER SAFETY	28
UNDERAGE, UNLICENSED AND UNREGISTERED RIDING	29
ADOPTING A TRAIL RIDING CODE OF CONDUCT	31
FACILITATING THE CREATION OF DEDICATED DIRT BIKE RIDING AREAS	32
PROMOTING EXISTING OPPORTUNITIES	33
RECREATIONAL REGISTRATION	34
IDENTIFYING FUNDING OPPORTUNITIES	35
CONCLUSION	37
APPENDIX	38



EXECUTIVE SUMMARY

Planning by the NSW Government and numerous land managers to provide opportunities for safe and legal, non-competitive trail bike riding in NSW has largely been ad-hoc and limited.

There are few places in NSW where community members can legally ride a trail bike 'off-road'. A minefield of legislation applies to trail bike riding and law enforcement is divided between State and Local governments. Our objective is to lobby the NSW Government and its agencies to develop, adopt and implement a NSW Recreational Trail and Adventure Bike Strategy that:

- Acknowledges trail and adventure bike riding as a legitimate and healthy recreational activity
- Enables participant access to suitable and sufficient riding areas, and where possible legitimises single-track riding
- Addresses the legitimate concerns of the variety of stakeholders, especially land managers

Population growth and robust motorcycle sales have seen the demand for suitable trail bike riding areas increase. Compound this with diminishing riding areas, especially in the ever-expanding Sydney region, and the rising level of usage of available areas is to their detriment.

Because of limited planning for the provision of safe and legal trail and adventure bike riding opportunities, government bodies and developers face difficulties allocating space for the activity in the local environment to ensure minimal disturbance.

NSW National Parks and Wildlife Service (NPWS) currently supports recreational pursuits as one of its key functions. NPWS is not however generally supportive of motorised recreational use of National Parks. Their key objective is the conservation of the State's biodiversity and cultural heritage, and these are often seen as mutually exclusive.

Forestry Corporation of NSW (FCNSW) has an extensive network of publicly accessible forest roads, allied with a number of visitor facilities including picnic areas. FCNSW's primary remit is forest management to enable sustainable timber harvesting.

Other land managers appear unable to actively support recreational pursuits, let alone motorised ones, due to the objectives and functions under their own legislation and regulation.

Riders span all age groups and although trail bike riding is largely seen as a male activity, many females also participate. Based on the number of bikes sold, NSW has approximately 75,000 active trail bike riders along with many more adventure bike riders. Clearly, trail and adventure bike riding is a popular activity undertaken by significant numbers of people across all age groups and demographics.

In September 2020 a survey of trail bike riders was undertaken by the Motorcycle Council of NSW (MCC). The results of this survey are available in summary form as Appendix 2. Full results can be found on Outdoors NSW & ACT website. This Discussion Paper is one outcome of that survey with the MCC and ONSWACT now working together towards the development and adoption of a NSW Recreational Trail and Adventure Bike Strategy. Our success hinges on the recognition of trail and adventure bike riding as legitimate and sustainable recreational activities, and for participants to enjoy trail and adventure riding well into the future.

Trail and adventure bike riding is a legitimate sporting activity and entails strenuous physical and mental exercise. If not well managed however, it raises legitimate concerns for numerous stakeholders including landholders, land managers, State government agencies, local councils and the riders themselves. Noise, dust, safety, environmental impacts and finding safe and legal places to ride are among the challenges faced by riders, land managers and regulators.

The development and implementation of a comprehensive NSW Recreational Trail and Adventure Bike Strategy will benefit the NSW community and its stakeholders by delivering the vision that trail and adventure bike riding is acknowledged and supported by government, land managers and the general community as a legal, legitimate, healthy, sustainable and active recreational activity.

In developing a NSW Recreational Trail and Adventure Bike Strategy, this Discussion Paper aims to inform readers on key elements to be considered, and when accompanied with the White Paper, has identified some urgent needs amongst the stakeholders in the trail bike community.

DISCUSSION POINTS

INSIGHT

Trail and adventure bike riders are looking for a bush experience that can challenge them physically and mentally.

WHAT IS RECREATIONAL TRAIL & ADVENTURE RIDING?

Non-competitive, motorised trail bike riding, or simply trail biking or trail riding, is increasingly being recognised in [NSW as a legitimate and healthy recreational activity](#), attracting people from all ages and demographics. Another frequently used term to describe the activity is 'dirt biking' or 'dirt bike riding', however trail riding is considered a subset of dirt bike riding.

Trail bike riding, as a non-competitive, recreational activity, is typically undertaken in natural settings such as forests. In NSW, this is due to the forests of the coast and Great Divide being adjacent to the major population centres. As trail bike riding also occurs 'out west' and in other destinations across the state it is considered a state-wide activity.

For social and safety reasons, trail riding expeditions are typically undertaken by multiple riders and may cover up to 100kms per day. A ride often involves transporting the bike to and from a starting point adjacent to the ride area however for some, it may commence at their home. Types of terrain covered include forest roads and tracks, fire trails and what is known as 'single-track'.

'Adventure riding' is a recent term to describe the merging of road bike riding and trail bike riding, where longer distances 'off the beaten track' are traversed over generally less technical terrain. Gravel and easy forest roads and tracks are the usual target destinations for adventure riders. The bikes are bigger, heavier and with longer range and the ability to carry significant amounts of luggage such as camping gear. A day's adventure riding may cover 300 - 500kms or more and a rider can be self-sufficient for days.

Trail riders on smaller, lighter bikes typically seek rougher, tighter, more technical terrain than adventure riders. In general, adventure riders do not require access to dedicated off-road riding areas, whereas trail riders may.

INSIGHT

Trail and adventure bike riding is not a competitive sport.

MOTORCYCLE COMPETITION

Motorcycle competition dates back to the first days of motorised transportation when it was a key element of research, development and marketing for manufacturers. This remains the case for manufacturers today with riders involved for the sporting, recreational and social benefits they provide. Races are run from local club levels to state, national and international events in a variety of both on and off-road disciplines.

[Motorcycling Australia](#) (MA) is the controlling body for motorcycle sport in Australia and the affiliated State Controlling Body (SCB) for [NSW is Motorcycling NSW](#) (MNSW). Competitive riding activities typically take place on privately-managed land although some enduro events are held on public land under special permits.

Motorcycle sport and competitive riding and issues regarding motorcycle sport are NOT addressed in this discussion paper.

INSIGHT

Trail-riding provides physical and mental health benefits to its participants, thereby reducing societal health costs.

HEALTH AND SOCIAL BENEFITS OF SPORT

Trail or dirt bike riding is not only a recreational activity but also a sport as defined by the [NSW Government Office of Sport](#):

“Sport is defined as physical activity that can be undertaken by a team or an individual in a social or competitive environment in pursuit of a result. It can be organised or less formal with a greater focus on social outcomes.”

Trail bike riding does involve the above-mentioned aspects. It is a physical and mental activity that offers varying levels of physical challenge to the participant, resulting in emotional satisfaction and consequent mental wellbeing.

As a competitive sport, trail bike riding can evolve into enduro and/or motocross competition and racing. These events are routinely conducted by accredited clubs and associations across NSW and elsewhere, typically on private lands but also on public lands via special permits.

The stance the [Australian Government Department of Health](#) takes on sport is:

“Participating in sport and physical activity helps Australians to enjoy healthier, happier and more productive lives. It also helps to bring communities together and benefits the local economy.”

“Engaging in physical movement and achieving adequate sleep are essential components of preventing poor physical health and for establishing and maintaining strong mental health and wellbeing.” [Preventive Health Strategy 2021](#)

Increasing the number of active people in society delivers preventative health outcomes by reducing societal health costs and trail riders contribute to this reduction.

In the 2010 Burr, Jamnik, Gledhill study [Physiological Demands of Off-Road Vehicle Riding](#) the health and wellness benefits of dirt bike riding were studied. Recreational riders of off-road vehicles in the random study catchment had physiological profiles slightly healthier than the general population. On average, the dirt bike riders in this study had higher aerobic fitness compared to the general population and had lower mean levels of adiposity (fat) plus increased strength and power. Dirt bike riders also had healthier anthropometry and fitness characteristics and thus fewer health risk factors for future disease.

Adequate physical exercise such as dirt-bike riding has beneficial effects on both physical and mental health and wellbeing. The [Australian Government Productivity Commission Report into Mental Health](#) highlights the cost to society of poor mental health.

Researchers also suggest exercise can help ease common mental illnesses such as anxiety and depression, as well as sleep problems. Providing people with fun activities to participate in also lessens boredom which can lead to anti-social behaviour.

UK studies have further identified trail riding as a physical activity that provides health benefits to participants: [The Health Benefits of Trail Riding](#).

Studies by the Australian Institute of Criminology show that youth crime can be prevented, and the likelihood of reoffending reduced, through the involvement in sport hence reducing boredom and decreasing the amount of unsupervised leisure: [Crime Prevention Through Sport and Physical Activity](#).

Evidence from other studies suggests physical activity offers effective treatment and preventative benefits for stress-related illnesses. Higher levels of physical activity increase feelings of self-efficacy and confidence with exercise now considered an anti-depressant. [Healthy Parks, Healthy People South Australia 2016-2021](#) identified that having access to trails within protected areas contributes to improving the quality of life for South Australians by encouraging greater use of natural environments that enhance physical, social and mental wellbeing.

Trail riding is at times mentally and physically demanding. Motocross, a subset of off-road motorcycling, is often considered one of the world's most physically demanding sports: [Are Motocross Riders the Fittest Athletes in the world?](#)

BUILDING RELATIONSHIPS WITH STAKEHOLDERS

INSIGHT
Stakeholder engagement is fundamental for acknowledging trail and adventure bike riding as legitimately healthy, recreational pursuits that benefit society in numerous ways.

Trail bike riding can impact communities, other recreational user groups and multiple State and Local government agencies. Sound community and interagency engagement is required to find effective solutions that will address any issues of concern.

To expedite the development of dedicated trail bike riding areas it is necessary to consider the objectives, concerns and interests of the four, broad stakeholder groups:

- 1.** Land managers are concerned about:
 - a. Legislation
 - b. Policies
 - c. Liability management
 - d. Insurance
 - e. Road classifications
 - f. Suitable land availability
 - g. Access
 - h. Environmental issues
 - i. Flora
 - ii. Fauna
 - iii. Soil
 - iv. Heritage
 - v. Soil and track erosion
 - vi. Water catchment pollution
 - vii. Noise
 - i. Community concerns with respect to potential environmental impacts
 - j. Maintenance
 - k. Funding
 - l. Safety and protection of public places
- 2.** Trail bike riders and the trail bike industry want:
 - a. Safe, quality destinations to ride for themselves and their families
 - b. Reduction in conflict with other stakeholders and user groups
 - c. Acceptance of and provision for their recreational activity
 - d. Acceptance as a legitimate, consultative party for land-use bodies on issues affecting government
- 3.** Other trail users want:
 - a. Trail bike riders barred from walking, cycling and bridle trails so they can enjoy their own activity safely, and ensure trail preservation
- 4.** Regulators want compliance concerning:
 - a. Registered bikes
 - b. Licenced riders
 - c. Availability of enforcement
 - d. Safe operation of trail bikes

INSIGHT

“Dirt bikes” is a broad descriptor of bikes more suited to unsealed surfaces than road bikes, often otherwise known as off-road bikes, or trail bikes.

TYPES OF BIKES

Trail bike riding is a subset of the many forms of dirt bike riding. Historically, motor bikes were used for all types of riding however refinement and specialisation over time has resulted in different dirt riding disciplines and the development of bikes to suit those disciplines, or subsets.

As some off-road disciplines are similar, a bike designed for a particular purpose can crossover depending on the skill of the rider and the nature of the discipline. Trail and enduro bikes are perhaps the best examples of this happening.

Although not exclusively, trail, dual sport, enduro and adventure bikes are typically used for trail riding. For more information on bike types see Appendix 1.

ELECTRIFICATION

The bikes used for trail and adventure riding are historically powered by conventional petrol-fuelled, internal combustion engines or ICE. More recently, manufacturers are developing bikes equipped with batteries and electric motors which are slowly gaining market acceptance. A limited range of road bikes, scooters, electric quads, trials and motocross bikes of various sizes are currently available.

With respect to trail bikes, a small number of electric enduro models are currently available. The range offered for trail riding with current battery technology is limiting, however it's anticipated that increased energy densities under development will ultimately address this concern. The timeframe for commercial implementation of the improved batteries is at this stage still unclear.

One outcome of the electrification of trail bikes is the reduction in noise output. Excessive noise is often cited by the public as one of the major concerns regarding trail bikes.

Electric bikes will likely gain wider acceptance in the future as costs lower and batteries improve by becoming lighter and achieving greater energy density.

A survey conducted by the [MCC](#) was recently undertaken to determine rider interest in adopting electric trail bikes. In summary, trail riders are interested in adopting electric trail bikes if there aren't too many compromises on specifics like range and weight.

INSIGHT

Trail and adventure bike electrification will gain momentum in the future with electric trail bikes, like other electric vehicles, likely to receive more market acceptance through improved battery technology.

INSIGHT

There is currently only one public location in NSW where junior, unlicensed riders can obtain a permit to ride.

WHERE PEOPLE RIDE

In NSW, recreational use of trail and adventure bikes across public lands has been a popular pastime over the last 50 years. Approximately 60,000 kms of publicly-accessible roads across State forests and Crown land provide access for motorised vehicles through bush areas, enabling a riding experience away from crowds and traffic. NPWS also has a significant number of roads and some trails available for public use.

INSIGHT

Locations for trail bike riding are becoming harder to access.

Trail and adventure bike riders share this road network with other users including bushwalkers, picnickers, four-wheel drivers, horse riders and bicyclists.

To access State forest and Crown land, trail and adventure bikes must be registered, the riders licensed to ride a motorcycle, and for Sydney riders in particular, there is also a need to travel significant distances to riding areas.

Stockton Beach near Newcastle is the only Recreational Vehicle Area in NSW. It was established under the Recreation Vehicles Act 1983. Children as young as eight can legally ride in this area and their motorcycles do not require full Australian Design Rule (ADR) compliance. Conditional registration specific for this area must however be obtained.

Younger, unlicensed riders relying on parents or others to transfer them to ride locations naturally prefer places closer to home where they can ride spontaneously. These locations include local parks and along fence lines, which can create problems.

There are several, privately-owned ride parks in NSW. The majority are a considerable distance from the main population centres and they can also be crowded making access for many problematic. As registered bikes are not typically required however, they can suit families and unregistered bikes. A growing difficulty for ride parks is the propensity of nearby residents making complaints to local council and urban encroachment on the land of private providers.

Furthermore, obtaining council approval to establish ride parks on private land is often difficult due to objections regarding environmental degradation, noise and dust.

Trail bike capability means riders can visit multiple places throughout the year where conventional, four-wheeled vehicles cannot go. Whilst the overgrown nature of some fire and management tracks can limit the passage of four-wheel drive vehicles, trail bikes are less bound by such physical restrictions. Additionally, trail bikes are less restricted by the condition of some tracks in certain weather conditions that can naturally limit four-wheel drive vehicles.

Maps of NSW showing State forests and national parks are attached in Appendix 3.

INSIGHT

Notwithstanding the availability of occasional organised events, most trail and adventure bike riders ride casually and socially on an ad hoc basis.

ORGANISED EVENTS

In previous years organised trail bike rallies have attracted up to 1,000 riders for a weekend ride. These events can be organised by a profit or a non-profit entity and tend to take place in State forests under permit, sometimes partially on adjoining private land (with permission) where single track has been made available. 2020 & 2021 presented many challenges for these events and as a result may never reappear.

Future events may include:

- [Sunny Corner Trail Bike Rally](#)
- [Watagans Trail Bike Rally](#)
- [Kowen Ride in the ACT](#)
- Numerous commercial trail tour operators run events for relatively few riders, typically 5-20, and where necessary will arrange any permits

Competition events like the [Australian 4 Day Enduro](#) have been held in the Hunter and on the Far South Coast on a mixture of private and public lands.

Longstanding events that have recently fallen by the wayside – due to the loss of riding areas and/or increased bureaucratic and financial demands – include:

- [Batemans Bay Apex Ride](#)
- Coffs Harbour
- Milton Ulladulla

Clubs and associations such as the [DSMRA](#) and [AMTRA](#) routinely hold trail and adventure riding events. These events are not typically run under any formal permit process and take place on public lands such as State forests and national parks. As these are official club events, some insurance cover is provided to the organisers.

The far more common and frequent informally-organised events are arranged via social media platforms such as Facebook. These are held virtually every weekend and also throughout the week typically involving 5-10 riders.



INSIGHT

Trail and adventure bike riders deliver direct economic benefits to communities adjacent to riding areas.

DIRECT COMMUNITY ECONOMIC BENEFITS

Trail riding provides many direct and indirect socioeconomic benefits. Owning and operating a motorcycle requires expenditure on the initial purchase and ongoing operating costs:

- Bike
- Parts and accessories
- Servicing
- Petrol and consumables
- Other transport: car, ute, trailer

Numerous towns have formally identified the economic benefits derived from trail and adventure bike riding. Dungog Shire Council in the Hunter has explicitly identified trail and adventure riders, or road and off-road motorcyclists, as making a positive contribution to the town's economy in their [Dungog Shire Visitor Strategy & Destination Management Plan 2021-2026](#) page 6.

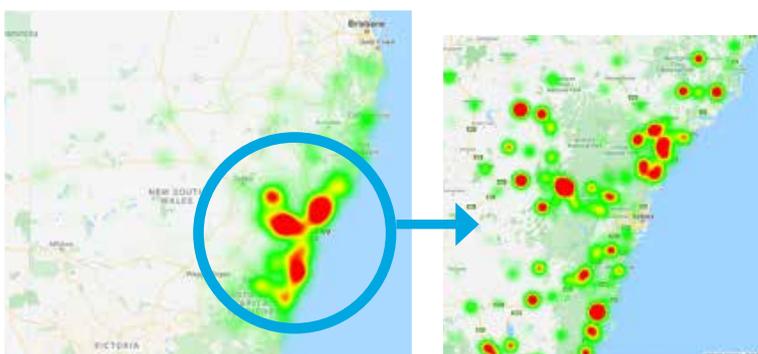
There is clearly an opportunity to investigate any other Council Destination Management Plans (DMP) that identify and include the economic benefits of visiting trail and adventure bike riders to their communities.

A survey to obtain economic data to help quantify the tourism and community contribution generated in NSW by trail and adventure bike riders has been jointly initiated by ONSWACT Trail and the Adventure Bike Riders Subcommittee covering:

- Food and drinks
- Accommodation
- Entertainment
- Fuel

One person spends an average of \$524 per trail bike trip and the average group (consisting of 6 people) spends \$3,144 per trip in the region of travel. Across one year, an average group injects \$49,518 into the local economy in the region they visit. To extrapolate this further, there are 75,000 trail bike riders in NSW which equates to a \$618,975,000 injection into local economies throughout NSW and the ACT from trail bike riding.

The most popular trail bike riding areas can be seen in the image below:



GENERAL ENVIRONMENTAL CONCERNS

Environmental damage is an often-cited reason to prohibit certain user groups from public lands, including trail bike riders.

Trail and adventure bike riding provides opportunities to experience nature firsthand and to learn about conservation. Trail information and signage often identifies specific features along a trail which enhances appreciation of the natural and cultural heritage. Increased knowledge and understanding of the environment can help build support for conservation programs: [Healthy Parks, Healthy People South Australia 2021-2026](#).

Many trail bike riders who enjoy the natural environment are conscious of degradation in the locations they ride and their advocacy can influence other riders to be more environmentally responsible. To maintain access to ride locations, most riders are willing to act in ways that reduce impact on the natural surroundings. This includes using alternate areas and working to conserve damaged or threatened sites. Page 29 the South Australian [Off Road Motorcycling Strategy and Facility Master Plan Final Report](#) refers.

INSIGHT

Motorised recreation in the bush, including trail bike riding, can be managed in an environmentally sustainable way.

INSIGHT

Management and emergency response benefits when trails are open and functional.

INSIGHT

An opportunity exists to formerly investigate the environmental impacts of trail bike riding

INSIGHT

Illegal trail creation and use is a major concern for land managers and enforcement agencies.

ILLEGAL TRAILS

While most riders do the right thing, it only takes a few irresponsible riders to harm the reputation of all trail bike riders in general.

A major concern for land managers such as the Forestry Corporation of NSW (FCNSW) is that an unauthorised trail has not been assessed for a variety of issues including:

- Land tenure – riders may follow the trail unknowingly going onto private property
- Environmentally sensitive areas such as:
 - Flora reserve within State forest
 - Mapped Old Growth or rainforest
 - Creeks/riparian zone
- Aboriginal and historic sites
- Erosion potential

It can be hard for recreational riders to distinguish illegal networks of trails, such as logging and single tracks, from the legal track network. As a result, the illegal track network gets more use, the behaviour becomes more established and the environmental problems can grow in scale. In some instances, the growth of illegal trail networks challenges the ability of public land managers to close and rehabilitate them. Gates or fencing barriers installed by land managers to prevent four-wheel drive and trail bike access are sometimes destroyed, or new tracks created around the barriers.

In some forest areas, the length of illegally created track networks exceeds the legal public road network. These tracks, often forged by trail bike riders or four-wheel drivers, have been created to challenge users and are often steep trails that go against natural contours, through wet or boggy areas and/or across creeks and streams. These trails can soon begin to erode and their environmental impact only grows with constant use and no remediation. Nevertheless, it is possible to create tracks that are sustainable and this initiative could be made legal if the framework exists to do so.

Prior to a trail being authorised, an assessment of its vulnerabilities and any management needs must be identified. Under the NSW Environmental Planning and Assessment Act, there is an environmental assessment requirement if there is potential for any damage or impact to the environment. These assessments can take several forms such as Environmental Impact Assessments (EIAs), Environmental Impact Statements (EIS), Review of Environmental Factors (REFs), Species Impact Statements and others.

The regular use of trails does keep them open and available for emergency services when needed. To this end, trail and adventure riders and four-wheel drivers indirectly provide a valuable service to the community. In rural areas in particular, these user groups are often members of emergency service groups such as the Rural Fire Service (RFS) and State Emergency Service (SES) hence responders have first-hand, up-to-date information about accessing these trail areas should an emergency occur.

INSIGHT

Erosion is a key environmental concern that can be managed sustainably with suitable controls

EROSION

Soil erosion is caused by exposure to the forces of water, wind and gravity. Trail bike operation is often identified as an environmental concern due to its soil erosion potential.

When vegetation cover is decreased due to over-stocking, over-cultivation or vehicular operation, the wind force on the soil surface is increased causing erosion. The same soil surface exposed to rain and run-off is also vulnerable to erosion from water. On slopes, gravity assists the process.

Differing soil types are variously vulnerable to erosion and specific vulnerabilities must be assessed on a case-by-case basis. Soil science is complex and beyond the scope of this discussion paper.

The ecological effects of sediment pollution in waterways include:

- Smothering or burying the habitats of aquatic plants and animals
- Clogging the gills of fish and other aquatic animals such as macroinvertebrates
- Reducing the growth of aquatic plants such as macrophytes or reeds in streams, and seagrass in estuaries, due to reduced light penetration

Sediment typically has other impacts such as:

- Increasing the risk of flooding due to blocked drains and accumulation in streams
- Transporting chemicals such as nutrients and contaminants into sensitive ecosystems
- Muddying water bodies, reducing their aesthetic appeal and restricting the suitability of the water for different uses
- Spread of weeds

SINGLE TRACK

For many riders single track riding is core to their trail riding experience. Since the advent of trail bikes in the late 1960s, trail riders have opened up single tracks in the forest areas of NSW. Single tracks can average 1m in width, while zigging and zagging between obstacles such as trees and rocks. They are often much narrower than 1m for significant distances. Single track is preferred over twin tracks, roads or fire trails because the speeds are lower, the physical and mental challenge is greater and the likelihood of encountering vehicles coming in the opposite direction is far less (and if they do appear, their speed limits are similarly lower).

Even though it has been happening for many years, single track creation and use by trail bike riders is unfortunately often cited as a key concern for land managers. Single tracks through the bush on public lands do not typically constitute a formed or gazetted road. It is an offence for riders and drivers to either create or use single trails in NSW if not a gazetted road. Single track riding is legal in limited places, typically on previously formed tracks or roads overgrown through lack of use by four-wheel drive vehicles, or when a permit is obtained following due process.

One exception is when written permission is given by Forestry Corporation in State forests: [Using Roads in NSW State Forests](#).

Single tracks are also used by bush walkers, horse riders and cyclists. More often than not, trail riders have initially blazed the single track used by other forest users. In recent times, cyclists on mountain bikes (MTBs) and electrically-assisted bikes (EMTBs) have "taken over" suitable trails established by trail riders. Although MTBs generally require less trail length than trail bike riders the sustainability issues are largely the same.

A key point of difference for trail riders that doesn't apply to cyclists is the licencing and registration requirements. Single track riding is mostly illegal for trail riders yet is encouraged for cyclists. This is a conundrum, as speeds are often similar, however as trail riders generally wear extensive protective clothing and armour this suggests the safety risk is lower for trail riders on single track compared to cyclists.

INSIGHT
Single track riding is a core component of trail riding for a majority of trail riders.

INSIGHT
For the most part, single track riding is currently illegal on public lands in NSW.

INSIGHT
Single track riding can be, and usually is, environmentally sustainable

INSIGHT
Single track occupies a very small area within a much larger area.

INSIGHT
Riding single track on trail bikes is subjectively safer than riding bicycles.

INSIGHT
A simple mechanism must be established to enable legal and readily-available single track riding opportunities for trail riders on NSW public lands.

The increase in available areas for MTBs has generally been the result of local MTB clubs lobbying their local council and relevant land managers.

As native flora is allowed to grow unimpeded by the riders, the trails can often be difficult to see. In fact the only time a single track is modified is typically when a tree has fallen across it, requiring the creation of a diversion if it's not possible to ride over it. Unless routinely ridden, some sections can disappear in as little as 6 months or so as vegetation reclaims the trail.

While understorey thickness can restrict the ease of trail creation in some forest types, persistence and time has consistently demonstrated the ability of trail bike riders to establish networks of single track on public land.

The width of a single track varies depending on the terrain, geology, slope, vegetation and usage. Some sections are barely 0.15m wide, the width of a tyre, other sections may be a few metres wide for short distances. Overall, its considered that 1m is a reasonable average estimation that is likely an overestimate. For context, the total area of a single track in a typical riding area is tiny in comparison to the total available area. For example, 300km of 1m wide single track in a 40km² area occupies just 0.02% of that overall area:

Riding area 40km²	1,600,000,000 m²
300km single track 1m wide	450,000 m²
% single track overall	0.02%

There is currently a trial program in Victoria to develop an area at Neerim State Forest specifically designed for single track trail bike riding. The development of a similar program in NSW is encouraged.

INSIGHT

Noise impacts and mitigation must be included in any environmental assessment undertaken.

NOISE

Sound becomes noise pollution when it is perceived as unpleasant or undesirable and therefore unwanted.

Noise often rates as one of the most troublesome issues with trail bike use on public lands. The decibel level at which sound becomes noise pollution varies significantly between individuals and also with the setting. People are likely to be more sensitive to noise when in a quiet forest setting, however noise can also dissipate quickly in a forest.

The factors that can affect how noise is perceived are its level, character, duration, frequency, regularity, time of day and background noise. A noise for a short period may be acceptable to a resident or other land user going about normal activities, but may be unacceptable if it occurs for an extended period or too frequently. Acceptable noise during daytime may be unacceptable during the evening or overnight when there are higher expectations of residential amenity. Typically, noise that is steady in nature is not as disruptive as noise that has rapid variations over short periods.

Trail bike noise is a key concern for some rural residents, particularly for landholders whose properties adjoin public land where trail bike riding occurs. The noise impact on these residents can be considerable and can occur for prolonged periods, often for entire weekends.

Further, as the urban fringe has expanded with increased development, areas that may have provided good riding away from suburbia are no longer distant from residents. This soon leads to complaints about bike noise.

Sometimes riders can be their own worst enemies when it comes to noise, modifying their bikes with louder 'performance' exhaust systems which in most instances have limited, if any, performance benefit.

In determining appropriate management procedures for the operation of permanent trail bike sites in Queensland, consideration may be given to providing incentives for riders to use 4-stroke bikes as they have a lower perceived noise output: [Regional Trail Bike Facilities Needs Plan](#) page 33 refers.

Emission regulations have resulted in a significant reduction in the availability of 2-stroke motorcycles and the market is now dominated by 4-stroke powered bikes. Nevertheless, a couple of manufacturers still provide 2-stroke motorcycles to the Australian market and these bikes are often considered quiet. It's complicated! But there is evidence that the number of noise complaints in recent years is reducing.

In the future, concerns with noise may be alleviated with the development and adoption of electric trail bikes. This is notwithstanding the benefits that some noise provides by warning other users within proximity of an approaching trail bike.

The development of dedicated trail bike riding areas and associated unloading areas away from neighbours and other users would also help mitigate noise issues.

Sound and noise are discussed in more technical detail in Appendix 4.



INSIGHT

Urban expansion has decreased the size and increased the use of available trail bike riding areas within a reasonable travel distance for many riders.

LOSS OF RIDING AREA

Sydney expansion has all but eliminated fringe trail riding opportunities.

Areas around Menai, Blacktown, Prospect, St Clair, Penrith and Blacktown for example, were once readily accessible for many riders. As Sydney has grown, those locales are now suburbia and the new fringe mostly comprises restricted access water catchment or National Park. Historically, wherever there was some open land, a disused quarry or bush you could guarantee trail bikes would be there somewhere on a weekend.

To a lesser degree, riding areas have also been lost adjacent to Wollongong and Newcastle for the same reasons.

Regional Forest Agreements in NSW have reduced available riding areas, especially since the conversion of many State forests into national parks between the late 1990s to the early 2000s. Once forests were converted to parks, motorised public access was in most instances reduced or eliminated for budgetary or other reasons: [NSW Regional Forest Agreements](#).

State forests and Crown lands such as Jellore on the Southern Tablelands are currently being converted to fauna reserves managed by the National Parks and Wildlife Service. This is a current example of growing reduction in the areas previously available for trail and adventure riding:

- [Jellore Flora Reserve](#)
- [Flora Reserves](#)

As areas are closed-off, particularly those closest to population centres, the result is a more concentrated use of available areas sometimes resulting in them being 'loved to death'.

This concerning situation does not typically have a positive environmental outcome and further increases the conflict potential between user groups. Road improvement to address increased usage also negatively impacts users such as trail bike riders who are looking for a more remote and challenging ride.

Additionally, restricting access to trail bike riders will not prevent many from riding illegally and may even increase the level of illegal use. This can add additional strain to enforcement agencies not to mention environmental stress. In some areas, anecdotal evidence suggests riders have setup a warning messaging system to notify others of the presence of enforcement agency personnel.

CONFLICT WITH OTHER OUTDOOR ACTIVITIES

WALKERS, CYCLISTS, 4WDS, HORSE RIDERS ETC.

INSIGHT

Conflict with other user groups can be addressed by education and engagement, alongside the creation of additional, dedicated recreational areas for various user groups.

Trail bike noise and the perceived danger of collision can directly impact the enjoyment level of other forest users including cyclists, horse riders and bushwalkers. As well as seeking quiet, natural settings to undertake their recreational pursuits, many recreational users seek physical separation from motorised vehicles.

In popular trail bike areas on public land, picnic and camping areas frequently become assembly and unloading/loading areas for trail bike riders. This use can significantly impact the experience for other users.

In some locations, the development of MTBs and more recently EMTBs has resulted in direct conflict between those groups and trail bike riders accessing the same trail network. As previously discussed, there are several instances of trails created by and for trail bike riders being commandeered by mountain bike riders as 'theirs'.

Two-way trails and roads present a serious risk of head-on collisions, especially if one party is motorised. An upside to exhaust noise is that oncoming users may hear oncoming trail bikes or four-wheel drives before this occurs.

Naturally, conflict is only further exacerbated by the increasing concentration of fewer spaces close to where people live.

UNLOADING AREAS

INSIGHT
The creation of dedicated trail bike unloading sites distanced from residential areas can assist with alleviating concerns regarding traffic and noise.

As most riders transport their trail bikes into the forest on trailers or utes, unloading areas have become an increasing cause of conflict with other users. Understandably, trail bike riders seek to unload their trail bikes as close to the forest fringe as possible.

Other popular trail bike unloading areas are also campgrounds and picnic areas within the forest. As these areas are typically frequented by other users seeking the peace and solitude of the bush, trail bike unloading and warming-up can significantly impact their recreational experience.

Particularly if towing their trailers on unsealed roads, some riders will unload their trail bikes near rural residents who are then impacted by the noise associated with unloading and warming-up. In popular areas, this noise can be quite protracted during weekends and may commence early in the morning.

INSIGHT

Improved signage, accurate maps and education can reduce trespass.

TRESPASS ON PRIVATE AND PUBLIC LANDS

Trespass can be deliberate but more likely inadvertent and Google and other map applications aligned with GPS navigation contribute to accidental trespass. People typically presume a road or track appearing on a map must be legally accessible. This can result in illegal trespass on privately-owned or public land managed by the State or Local government such as parks, railway easements, stock routes and beaches.

Police, rangers or council officers have the power of authority over illegal riding of trail bikes dependent upon the specific tenure.

Unauthorised riding on private land is a concern in rural areas where primary production occurs. Police can act against a person trespassing on private property with their trail bikes if requested by the landowner. Detecting a trespass can be difficult however in relation to properties with absentee landlords.

INSIGHT

Trail rider safety risks are reduced when riding in groups, implementing one way travel on trails and tracks, using PPE and effectively communicating with emergency services.

TRAIL RIDER SAFETY

Trail bike riders risk a range of injuries including chest, leg and head injuries, fractures, cuts, and abrasions up to and including death. These risks are exacerbated by riding in bush locations that are often somewhat remote from emergency services.

Trail bikes pose a hazard to other users including walkers, cyclists and horse riders while vehicles such as other trail bikes or four-wheel drives travelling in the opposite direction can create a hazard to trail bike riders.

It is difficult to obtain accurate data on the level of injuries and fatalities of trail bike riders on public land. The most relevant source is a [Victorian Injury Surveillance & Applied Research](#) report on the pattern of injury in specific sports and active recreation activities which includes motor, trail and mini-bike riding. This 2002 report is based on hospital admissions and presentations – when a patient attends a hospital and is treated but not admitted.

For the study period of 1998 to 2001, there was an average of 203 admissions and 598 presentations each year. 36% of injuries involved the lower extremity, 22% affected the upper extremity and of the admissions, the majority were fractures (54%), followed by multiple injuries (9%), open wounds (7%) and intracranial injuries (6%).

One key risk-mitigation measure for trail bike riders is the use of personal protective equipment (PPE). Items such as helmets, gloves, body armour and heavy-duty boots are the norm for almost all riders, albeit with helmets the only legal requirement for riding on public roads.

In addition to PPE, risk management measures include:

- Riding with a group
- First aid training
- First aid kits
- Personal locator beacons (PLBs)
- Satellite phones
- Trackers such as SPOT or InReach
- Emergency phone apps
- Rider training courses

UNDERAGE, UNLICENSED AND UNREGISTERED RIDING

INSIGHT

The development of dedicated off-road riding areas, along with additional recreational vehicle areas such as Stockton Beach, can reduce the incidence of illegal unregistered, underage and unlicensed riding.

As previously outlined, riding dirt bikes has documented health benefits. It contributes to the development of coordination, balance, strength and judgement that young riders can particularly benefit from. Although not all parents accept the risks associated with dirt bike riding many do see the benefits. In addition to individual skill development, family and social bonds can be strengthened if parents or guardians ride together with their children.

Parents of junior riders seeking legal and safe areas to ride as a family group may run into obstacles due to a mix of registered and unregistered bike regulations. Their options are limited to riding on private land, a private ride park or in the designated off-road vehicle areas. Stockton Beach is currently the only destination that exists for this purpose in NSW.

According to the law, a rider on public lands must be licensed and on a registered bike. Therefore the lack of suitable areas to ride is most keenly felt by the same demographic – underage, unlicensed riders and riders of bikes unable to be registered.

Some of the biggest growth in recent motorbike ownership falls in the categories of quad bikes, mini-bikes and motocross bikes. This continuing growth in sales of bikes which cannot be legally ridden on public roads is understandably creating increased demand for legal venues to ride.

Unregistered, off-road motorcycles tend to fall into two categories:

- Registrable motorcycles that are not registered
- Motocross, quad bikes and mini-bikes that are not Australian Design Rules (ADR) compliant and cannot be registered for use on the road

Unregistered motorcycles are legal for use on private property and are sometimes used illegally in public areas. This use with no associated compulsory, third-party insurance protection is clearly problematic should an incident occur.



ADOPTING A TRAIL RIDING CODE OF CONDUCT

INSIGHT

Adoption of a trail rider code of conduct by riders can assist with the communication and management of a variety of concerns including legality, safety and the environment.

Voluntary codes of conduct are adopted by a variety of other groups including mountain bike riders and horse riders. These codes are also seen as educational and therefore encourage socially positive behaviour.

The development and implementation of a code of conduct by and for trail bike riders will be an effective education tool for all trail bike riding stakeholders.

A proposed code could include:

- **Ride legally, comply with all legislation, regulation and insurance requirements:**
 - No Licence. No Rego. No Ride.
 - No trespassing
 - Ride only on existing trails
 - Some trails are seasonal
 - Do not ride on closed trails
- **Respect and help to protect the environment:**
 - Check the trail conditions before heading out and ride accordingly
 - Help protect fauna, vegetation and ecologically or culturally sensitive areas
 - Take extra care in damp and wet conditions
 - Ride with a clean bike, don't transport soil and seed
- **Expect and respect others who also have the right to be on the trails:**
 - Courtesy is the best safety practise, remember your behaviour is a reflection of the greater trail riding community
 - Watch for oncoming riders and other trail users in the instance of poor sightlines or blind corners
 - Few vehicles are as manoeuvrable as dirt bikes so stay on your side of the main trails
 - Stop when you see a horse and rider, shut off the engine and ask for instructions from the rider:
 - If you must continue, ride slowly and safely past the other trail user
- **Don't be a car park hero**
- **Consider the worst possible situation and cater for it:**
 - Always wear a helmet and other safety gear
 - Use phone apps like Emergency Plus and/or carry an EPIRB and first aid gear
- **Do not litter, take out what you take in, leave the place better than you found it**
- **Reporting significant trail degradation is important for maintenance and access**
- **Do not use any alcohol or drugs if you plan to ride**
- **Keep your bike QUIET: more sound = less ground!**
- **Support trail maintenance, no trail maintenance = no trails = no riding**

FACILITATING THE CREATION OF DEDICATED DIRT BIKE RIDING AREAS

To reduce the amount of undesirable trail bike use there must be more provisions made for the managed use of trail bikes.

The initial identification of existing areas and trails where trail bike use can be encouraged must be undertaken. Then, determining the quantity and type of trails is required followed by a gap analysis to identify opportunities.

In general, the more dispersed the riding the greater the opportunity is to:

- Reduce the environmental impact that occurs through overuse
- Provide separation of uses to avoid usage conflict between user groups
- Provide the diversity of experiences sought by trail bike riders
- Attract trail bike riders away from areas where trail bike use creates problems

Private landowners looking to provide riding opportunities to trail bike riders for a fee (or otherwise) should be supported through planning schemes.

There are approximately 13 approved MTB Parks currently operating under forest permits in NSW State forests. These are a designated parcel of land where an MTB Club is the permit holder operating under a set of conditions they must comply with. Although it is not a lease, the permit process offers an approval system to authorise these areas for the recreational pursuit.

The permit holder pays fees to Forestry. Forestry does not pay for any of the developments. Local MPs and councils have been supportive of MTB development once there is approval from the land manager. This support is usually in the form of grants.

Local governments ideally must incorporate planning for trail bike riding into their tourism, sport and recreation plans.

Strategies developed elsewhere for trail bike management suggest that planning for trail bike facilities within long-term, strategic, land use planning – with suitable environmental controls – is crucial to the management and protection of existing and planned facilities, including trail networks.

INSIGHT

The lessons learned by the MTB community in successfully delivering MTB riding areas should be leveraged by the motorcycling community in developing the NSW Recreational Trail and Adventure Bike Strategy.

INSIGHT

Provision of trail bike riding areas can be facilitated by clearly defining the necessary processes for access and use.

PROMOTING EXISTING OPPORTUNITIES

INSIGHT

Marketing existing opportunities could reduce the incidence of illegal trail use and simultaneously increase the economic benefits derived by regional communities.

Promoting the use of the extensive network of existing State forest and national park roads and tracks by stakeholders, especially for adventure riders, provides an easy opportunity for communities and land managers to leverage the growing adventure bike market.



Image: Woomargama National Park, Wantagong
Photographer: Alesha Jewel Bradford

RECREATIONAL REGISTRATION

Motorcycles can only be ridden on public roads on public land if the rider is fully licensed and the motorcycle appropriately registered. Recreational registration schemes in [Victoria](#) and [Tasmania](#) have reduced registration and CTP fees – in addition to different construction standards for motorcycles with recreational registration – compared to fully-registered road motorcycles.

Recreational registration only permits access to roads located outside built-up areas and off main roads. There are approximately 41,000 motorcycles with recreational registration in Victoria.

The NSW Government regulatory structure for land management differs greatly to that of Victoria. NPWS, Forestry and Crown Lands all have their own tenure regulation and legislation.

The survey of 2,403 NSW trail bike riders conducted in 2020 found that 76% would use recreational registration if a scheme similar to Victoria was introduced. See Appendix 2.

Several attempts to introduce a recreational registration scheme into NSW have already been undertaken. Transport of NSW recently engaged with various stakeholders regarding this matter, including MCC NSW, FCNSW, NPWS, Crown Lands and the Department of Justice, however the NSW [State Insurance Regulatory Authority](#) (SIRA) quote to reduce fees was minimal and the process stalled.

Notwithstanding the failure to implement a recreational registration scheme in NSW to date, there are currently three existing forms of recreational registration in NSW:

- [Permit System as Used at Stockton Beach](#)
- [Historic Vehicle Registration](#)
- [Classic Vehicle Registration](#)

Insurance remains an obstacle for riders to access suitable areas to ride, especially for younger, unlicensed riders. Noting that previous attempts at establishing a wider implementation of a recreational vehicle scheme in NSW have been unsuccessful, it does seem that leveraging the existing schemes could be a way forward.

INSIGHT

Developing and implementing a recreational vehicle registration scheme for trail bikes can be done through leverage of existing schemes.

INSIGHT

A recreational registration scheme would increase compliance and reduce the risks imposed by unregistered vehicles.

IDENTIFYING FUNDING OPPORTUNITIES

INSIGHT
The development of a NSW Trail and Adventure Bike Strategy is dependent upon funding. Stakeholders and philanthropists could contribute to a well-defined project plan.

Funding is the immediate requirement to develop a NSW Trail and Adventure Bike Strategy in conjunction with all stakeholders. This strategy should include an action plan to address issues so that trail and adventure bike riding becomes a recognised and sustainable recreational activity. Grants could then be sought to implement, sustain and maintain the action plan.

Trail bike riders are typically taxpayers and it is not unreasonable for them to expect a portion of their taxes to go towards the provision of recreational facilities, in the same way that governments provide football ovals, skate parks, swimming pools, tennis courts, etc.

Not every Local Government Area (LGA) is able to provide trail riding facilities so surrounding LGAs with suitable land available – and who would derive benefit from the area – could assist with shared funding. Local facilities could also be partly funded on a user pays basis.

A proportion of fees from the registration of all road-going vehicles is allocated for road projects. Many trail and enduro motorcycles are road registered but are rarely or never ridden on the main or sealed roads. A proportion of their registration fees could be allocated to benefiting trail and adventure bike riders.

Fuel taxes contribute to road maintenance which means trail riders are subsidising the maintenance of national roads and highways yet are not receiving any direct benefit in return.

Given the motorcycle industry's vested interest, there may be opportunities for commercial sponsorship of riding areas and even specific trails. The industry could also be encouraged to place a 'conservation levy' on sales to raise funds for trail rehabilitation and restoration programs.



CONCLUSION

The Strategic Intent Statement published by the ONSWACT Trail Bike Subcommittee is summarised by:

Vision

That trail and adventure riding is acknowledged and supported by Government, land managers and the general community as a legal, legitimate, healthy, sustainable and active recreational activity.

Mission

To collaborate with Government, land managers and stakeholders to find solutions to the challenges of shared land use and to maximise opportunities that reaffirm the benefits of trail and adventure bike riding.

Strategic Intent

- a. **To improve the perception and understanding of trail and adventure bike riding as an active recreational activity that promotes the physical and mental health of its participants, while also increasing regional tourism**
- b. **Build partnerships with land managers and owners to pursue the needs of trail and adventure riders, including but not limited to NPWS, Crown Lands, Local Aboriginal Land Councils and key stakeholders such as NSW Police, Transport NSW and other regulatory authorities**
- c. **Build partnerships by actively working with other land users including, but not limited to, horse riders, bushwalkers, mountain bikers and four-wheel drivers**
- d. **Develop a NSW Trail and Adventure Bike Strategy that delivers positive outcomes for both the trail and adventure bike riding community and stakeholders**

The NSW Government must adopt a strategy that acknowledges and facilitates the non-competitive, recreational use of trail and adventure bikes across the State. With the growing number of trail bikes and riders, along with the ongoing reduction of suitable available land on urban fringes, this can no longer be ignored.

The development of a NSW Trail and Adventure Bike Strategy will create a framework that enables:

- The State government to establish a policy framework for trail bike riding which would establish guidelines for:
 - Land use parameters for trail bike riding
 - Enabling single track riding
 - Planning for and access to funding
 - Clarifying the role of the relevant and various government agencies
 - Enabling law reforms relating to trail bike use:
 - Recreational registration
 - Enabling riders under the licensable age to ride legally in specified areas and/or circumstances
- A fair, reasonable and transparent land use planning process for provision of places to ride
- Adequate diverse places for each type of trail bike activity to cater to rider needs
 - Provision of locations to ride that are in close proximity to demand, including single track
- Proper identification and protection of areas providing places to ride in Local government planning schemes
- Proper management for long-term, environmental and financial sustainability
- Local government incorporation of trail and adventure bike riding into their:
 - Sport and Recreation Plans
 - Destination Management Plans

The various concerns associated with trail and adventure bike riding remains a pressing issue. Recognition, education, legislation and regulation that supports trail and adventure bike riding is essential to move forward.

The development and implementation of a comprehensive NSW Trail and Adventure Bike Strategy will benefit the NSW community and its stakeholders by delivering the vision that trail and adventure riding is acknowledged and supported by Government, land managers and the general community as a legal, legitimate, healthy, sustainable and active recreational activity.

APPENDIX 1

TYPES OF BIKES USED FOR TRAIL AND ADVENTURE RIDING

Trail Bikes

Trail bikes, sometimes referred to as dual sport, are dual purpose machines used for trail riding – dual sport/purpose means they are suited for both on and off-road.

Trail bikes are generally easy to ride, reliable and can be registered. They are suitable for operation in metro areas as well as capable of travelling on highways and could therefore be considered a lightweight adventure bike. They can also be used for motocross and enduro riding, although the limitations of the bike for those more specialised disciplines becomes apparent as the riding becomes more technical.

Trail riding is best suited to larger areas of land as it caters for the exploration and enjoyment of the natural environment. Participants use registered trail bikes to explore the tracks, trails and sealed or unsealed roads to engage in the natural land areas, bush and forests.

Trail bikes can also be used for farm work with some models specially adapted by manufacturers and sold as agricultural or ag bikes.



Enduro Bikes

Enduro bikes are higher performance machines than trail bikes and designed primarily for off-road endurance, or enduro, racing events that are often held on private land and sometimes on public lands with suitable risk controls, permits, etc.

A formal enduro race event may take place over one or more days on trails and tracks which can have fast open segments and tight bush segments, requiring a significant amount of land.

Most enduro bikes comply with road registration requirements. Compared to trail bikes, they are typically lighter and have superior off-road suspension, brakes and handling combined with a lower weight. These advantages typically result in increased maintenance compared to a trail bike and they are less suited to road use.

Because of their superior off-road performance, most trail riders participate on registered enduro bikes rather than trail or dual sport bikes. This means trail riders more often than not ride enduro bikes when trail riding!



Adventure Bikes

Adventure and some dual sport bikes are designed for longer distance dirt road rides. They have bigger engines (typically 650cc to 1200cc vs. less than 500 cc for other types of off-road bikes), larger fuel tanks and can carry camping gear, supplies and potentially a pillion passenger. Trail bikes typically have passenger carrying capability too however this feature is rarely used due to the smaller size and lower power of the bikes.

The following types of bikes are sometimes used for trail riding. When used on public lands this activity is illegal as they are typically not eligible for registration.

Motocross Bikes

Motocross bikes are made for high-speed, competition-riding on enclosed, natural terrain courses with jumps and other obstacles. The bikes are not designed to be registered and are essentially for competition riding only.

Motocross bikes are also used for supercross, which is a type of motocross event held at both outdoor and indoor stadiums. The event typically involves several large and demanding man-made obstacles. There is often a commercial entity organising and running the event.

Motocross bikes are also used for freestyle riding, considered a subset of supercross, whereby riders perform individually and are scored on style and difficulty much like gymnastics and diving.

Supermotard riding is another subset of motocross whereby the bikes race on a closed course that combines obstacles on sealed and unsealed surfaces.

Trials Bikes

Trials Bikes, not to be confused with trail bikes (note the spelling), are very light, responsive and manoeuvrable and designed for riding over and around natural and manmade obstacle courses at low speed. These bikes are not normally registrable.

The competition events for trials bikes are sometimes known as 'observed trials'. Although it is not a speed event, skills are required to negotiate obstacles such as sharp climbs, rocks, logs, large tyres, etc. Only small amounts of land are required.



Minibikes

Mini-bikes are designed for riders up to about 12 years of age. They're small, lightweight and mostly can't be registered for road use.

Minikhana is an organised recreational event for junior riders on their mini-bikes traversing easy terrain of different lengths and types. It requires only a small amount of land.



Quad Bikes

Quad bikes, or four-wheelers, can be used recreationally on private land. There is a variety of specialised 'quads' developed for farm work through to off-road racing. Quads come in numerous sizes for kids and adults and in the rural sector, along with trail/ag bikes, they have largely replaced horses. They cannot typically be registered for road use.



Types of Bikes vs Types of Terrain

		Types of Terrain				
		Grade 0	Grade 1	Grade 2	Grade 3	Grade 4
Types of Bikes		Sealed Roads	Sealed roads and unsealed roads	Unsealed roads and open fire trails	Unsealed roads, fire trails, harder hills and may include single track	More difficult terrain fire trails and single track
Registered and Licensed	Road	Suited	Ok with care	Unsuitable	Unsuitable	Unsuitable
	Adventure	Suited	Suited	Suited	Ok with care	Unsuitable
	Trail	Suited	Suited	Suited	Suited	Ok with care
	Enduro	Ok with care	Suited	Suited	Suited	Suited
Unregistered	Enduro	Unsuitable	Unsuitable	On private property	On private property	On private property
	Motocross	Unsuitable	Unsuitable	On private property	On private property	On private property
	Trials	Unsuitable	Unsuitable	On private property	On private property	On private property
	Mini Bikes	Unsuitable	Unsuitable	On private property	On private property	On private property
	Quad Bikes	Unsuitable	Unsuitable	On private property	On private property	On private property

Suited	Ideally suited
Ok with care	Can be suitable as long as the rider is adequately skilled and the conditions are ok
Unsuitable	May be possible, but not recommended, will require a permit if unregistered
On private property	Depending on the actual terrain and rider skill, actual suitability varies



APPENDIX 2 – RIDER SURVEY

MCC OUTDOORS NSW & ACT TRAIL BIKE RIDER SURVEY SEPTEMBER 2020 RESULT SUMMARY

The survey of 2,403 participants included just under 60% in the 25 to 54 age group.

Reasons identified for riding:

- 89% rode to enjoy the outdoors
- 88% for mental health
- 85% to relax and reduce stress
- 83% for fun
- 82% for mateship
- 76% for fitness
- 63% for thrill/adrenalin
- 49% to socialise

Two thirds ride with their mates:

- 92.1% had a motorcycle licence
- 39.6% rode a couple of times a month and 23% rode every week
- 76.1% were not a member of a club

77.6% of bikes were registered, the reasons why bikes aren't registered were identified as:

- 31% couldn't be registered
- 27% didn't want to register their bike as they only rode in State forest, State recreation areas or Crown land
- 2% said they didn't ride enough to justify the cost of registration

76% would use recreational registration if a scheme similar to Victoria and elsewhere was introduced in NSW, i.e. if registration costs were reduced.

73.5% were concerned that access to areas will change in the future and of these, 61.9% thought this would be due to environmental issues while 53.6% said complaints by residents.

When asked what they want the Motorcycle Council of NSW Sub-Committee to do:

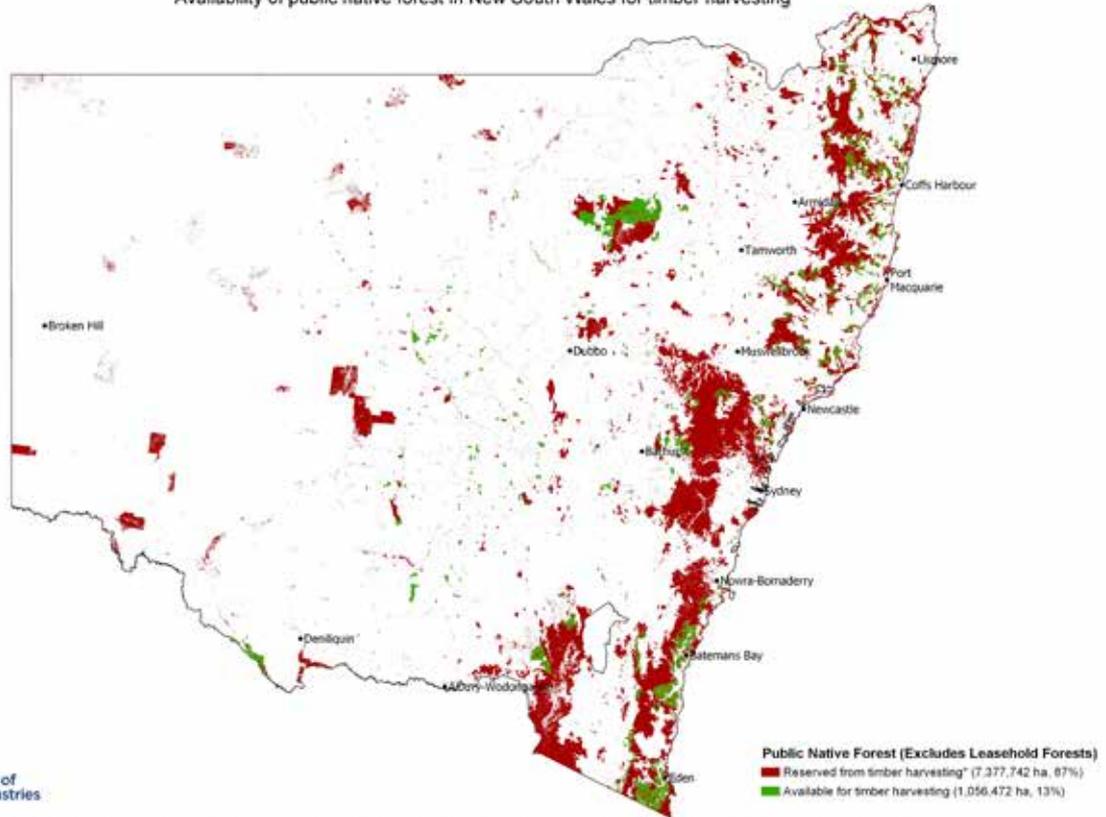
- 85% said defending off-road riding opportunities
- 82% said actively pursuing the needs of riders with land managers
- 77% said improving the perception of trail riding
- 71% said promoting and encouraging safe and responsible riding
- 65% said to be the peak body
- 62% said providing a NSW trail bike strategic plan

Riders' biggest concerns identified were:

- 74% trails will close
- 57% lack of designated riding areas
- 46% cost of registration

APPENDIX 3 – NSW MAPS OF FORESTS AND PARKS

Availability of public native forest in New South Wales for timber harvesting

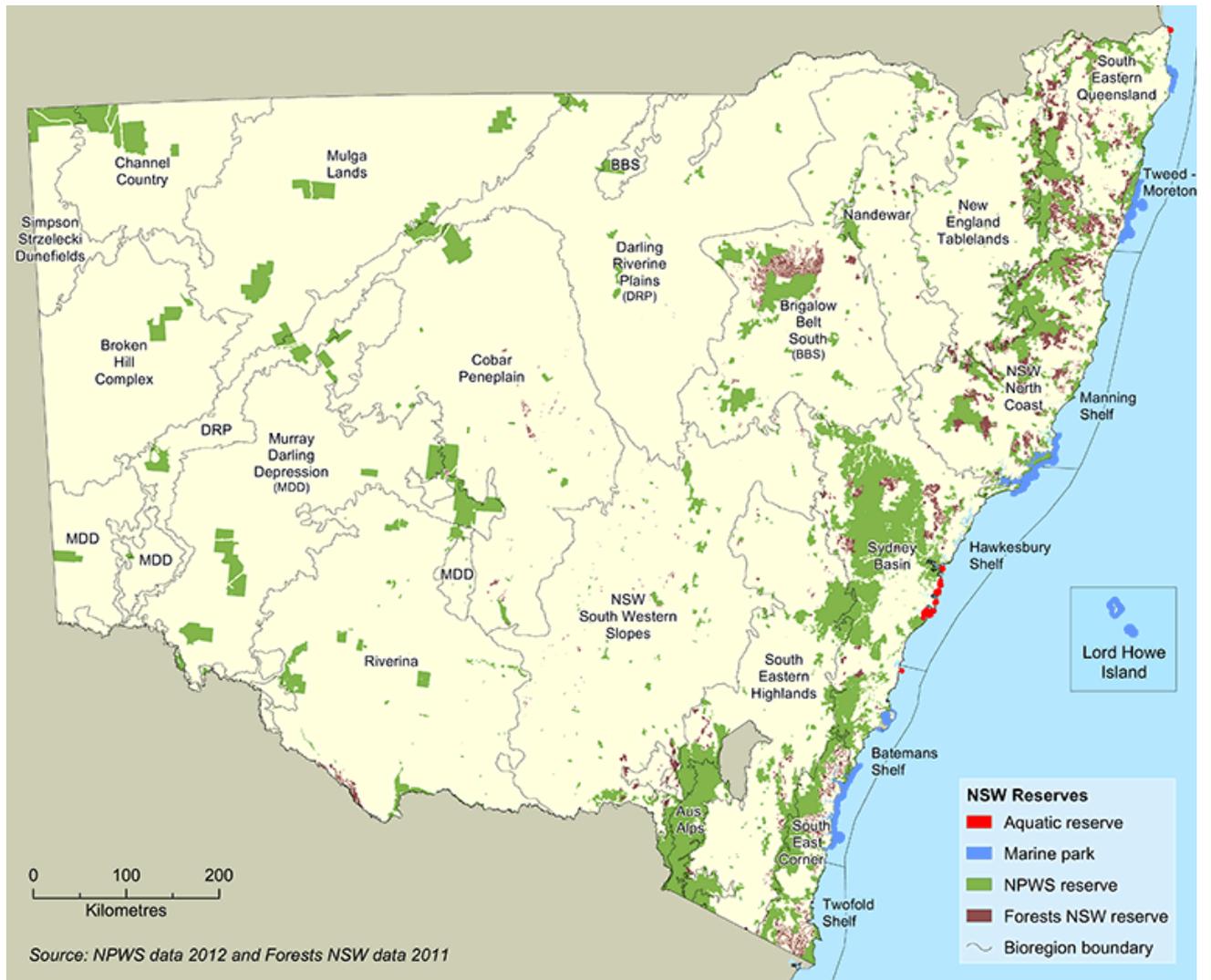


* This area takes into account areas reserved from harvesting by prescription that are not mapped – described as a “net harvest area modifiers” and “strike rate modifiers”. The calculation allowance for these modifiers is: 23.5% for the upper north east RFA region; 13.1% for the lower north east RFA region; 27.4% for South Coast RFA subregion; 15.5% for the Tumut RFA subregion; 26.0% for the Eden RFA Region; and; 0% for the Western Region.
 Data Source: Data used to prepare this map was sourced from existing approved spatial layers developed by the Department of Planning & Environment (DPE), Land and Property Information (LPI), and Forestry Corporation of NSW (FCNSW). DPE developed the NSW Woody Vegetation layer. LPI was the source of the Tenure data layer. FCNSW produced the Base Net Area layer (current at August 2018) and a Slope layer.

NSW Regional Forest Agreement Areas



[Regional Forest Agreements](#)



National parks and forest reserves, marine parks and aquatic reserves in NSW

Additional and more detailed maps are available from a variety of sources both online and in print.

APPENDIX 4 - NOISE

Sound becomes noise when it is perceived as unpleasant or undesirable and therefore unwanted.

Sound is the quickly varying pressure wave travelling through a medium. When sound travels through air, the atmospheric pressure varies periodically. The number of pressure variations per second is called the frequency of sound and is measured in Hertz (Hz) which is defined as cycles per second.

A loud noise usually has a larger pressure variation and a weak one has smaller pressure variation. Pressure and pressure variations are expressed in Pascal, abbreviated as Pa, which is defined as N/m^2 , or Newton per square metre.

The human ear can perceive a very wide range of sound pressures. The softest sound a normal human ear can detect has a pressure variation of 20 micro-Pascals, abbreviated as μPa , which is 20×10^{-6} Pa, or 1x20 millionth of a Pascal, and is called the Threshold of Hearing. On the other hand, the sound pressure in the vicinity very noisy events such as launching of the space shuttle can produce a large pressure variation at a short distance of approximately 2000 Pa or $2 \times 10^9 \mu Pa$.

The following table shows some sound or noise in terms of μPa :

Source of Sound/Noise	Approximate Sound Pressure in μPa
Launching of the Space Shuttle	2,000,000,000
Full Symphony Orchestra	2,000,000
Diesel Freight Train at High Speed at 25m	200,000
Normal Conversation	20,000
Soft Whispering at 2 m in Library	2,000
Unoccupied Broadcast Studio	200
Softest Sound Human Can Hear	20

Due to the very large range of sound pressures, more commonly a logarithmic scale converting μPa to decibels, or dB, is used for the measurement of the loudness of sound/noise, using 10 as the base.

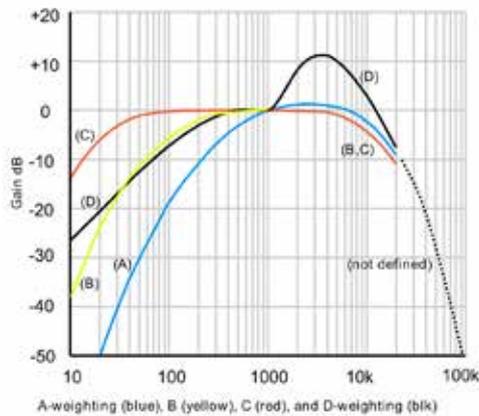
In subjective terms a sound that increases in sound level by 10 decibels would be perceived to have doubled in 'loudness'. The table below illustrates the effect of changes in sound level to apparent loudness.

Change in sound level (dB)	Change in output		Change in apparent loudness
	Decrease	Increase	
3	$\frac{1}{2}$	2	Just perceptible
5	$\frac{1}{3}$	3	Clearly noticeable
10	$\frac{1}{10}$	10	Half or twice as loud
20	$\frac{1}{100}$	100	Much quieter or louder

The term Sound Pressure Level, or SPL, is also sometimes used. It can refer to either dB or μPa . The human ear does not perceive all frequencies in the same way. The higher the frequency, the higher pitched a sound is perceived. For example, the sounds produced by drums have much lower frequencies than those produced by a whistle.

The response of the ear to sound is dependent on both pressure level and the frequency of the sound. The ear of a healthy person is more sensitive to frequencies between 2 and 5 kHz. and has a relatively

low response at low frequencies. Hence, the single sound pressure level obtained by simply adding the contribution from sound different bands/sources will not correlate well with the non-linear frequency response of the human ear, i.e. one's perception.



Graph provided from: [Difference Between dB and dB\(A\)](#)

This has led to the concept of weighing scales. The above diagram shows, among others, the “A weighting” scale. Here, the sound pressure levels for the lower frequency bands and high-frequency bands are reduced by certain amounts before they are combined to give one single sound pressure level value. This value is designated as dB(A), the blue line above.

The reference quantity remains the same; 20 μ Pa and the units are still dB SPL, but each value has a different gain depending on the frequency to better represent human auditory perception.

Motor vehicle noise levels

Motor vehicle noise level standards are based on the dB(A) scale. In 2005 a new Australian Design Rule 83/00 was introduced which brings Australia into line with prevailing international regulations (set by the United Nations Economic Commission for Europe – UNECE), this requires that motorcycles imported into Australia to meet “drive-by” noise emission levels.

ADR 83/00 Allowable Noise Levels

Engine Capacity	Maximum Drive-By Noise dB(A)
Less than or equal to 80cc	75
Greater than 80cc but less than 175cc	77
Greater than or equal to 175cc	80

For enforcement purposes it is difficult to replicate the ‘drive by’ test so ADR 83/00 includes calculating a ‘stationary noise level’ which is applicable to each model of motorcycle. A label is attached to each motorcycle specifying the maximum stationary noise level at a specified engine speed.

The requirements in Europe have been gradually reducing the allowable noise levels with each revision of the regulations. Euro 1 for motorcycles came into effect on June 17, 1999, followed by Euro 2 on April 1, 2004, and Euro 3 on Jan. 1, 2006. Euro 4 came into effect on Jan. 1, 2017 for all brand new models, while existing models received an extra year to be updated to meet the changing standards. Euro 5 applies to new models as of Jan. 1, 2020 with existing models having to conform to Euro 5 by Jan. 1, 2021.

Compared with dB, the A-weighted dB(A) measurements underestimate the perceived loudness, annoyance factor, and stress-inducing capability of noises with low frequency components, especially at moderate and high volumes of noise.

2-stroke and 4-stroke powered bikes produce markedly different noise signatures when perceived by the human ear. At the same dB(A) it’s generally considered that 2-stroke noise is more irritating to humans than 4 strokes due to the different frequencies that result from their differing fundamental engineering principles. However, higher frequency 2 stroke sound doesn’t carry as far as the 4- stroke’s lower frequency sound. This is further complicated by an engine’s capacity and operating RPM.

More information on noise and sound can be found here:

[Difference Between dB and dB\(A\)](#)

[Characteristics of Sound and the Decibel Scale](#)



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