

Warburton Mountain Bike Destination Health Impacts Statement

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Introduction

The Warburton Mountain Bike Destination Project is supported by Parks Victoria under their **Healthy Parks, Healthy People** Program.

One of the five objectives of the project is to:

Enhance the health and wellbeing of the community

The Project has also promoted the health benefits of mountain biking in their advertising, when applying for funding and other documentation.

And yet, despite the centrality of health to the very rationale for the project, there is no proper evaluation of these health benefits in the Warburton Mountain Bike Destination Project’s documentation to prove the validity of this claim.

The Environmental Effects Statement’s Scoping Document mentions health only briefly:

"The EMF should consider the need for monitoring of (at least): . . . public health and safety"¹

There are also a few mentions of the health impacts of noise and dust during construction.

The health impacts of the project must have far greater attention than this, if the project is to deliver on it’s objectives.

Under 2.3 Project benefits in EES WMBD Chapter 2 Project Rationale (Page 5) it is stated that the economic benefits of the project includes:

Indirect health benefits for Victorian users estimated at \$47.1 million over 10 years

with social benefits including:

Enhanced community access to infrastructure that encourages increased levels of physical activity as well as health and wellbeing outcomes

Assist in addressing high levels of obesity, dementia and poor mental health that are significant issues for the community

The Project also repeats this in Chapter 12 Socio-Economic of their Main Report.

They also state in 2.2.4 Current Socio-Economic Status WMBD EES Chapter 2 Project rationale, Page 3:

Investment in infrastructure that provides health benefits is crucial to combat health issues in the region. Within the Yarra Ranges area, 50 per cent of people were characterised as 'Pre-Obese' or 'Obese' in a health survey of residents in 2014 (DHHS, 2016). Fifty-six per cent of residents did 'insufficient' levels of weekly exercise (less than 150 minutes of moderate exercise per week), including three per cent who were classified as 'sedentary'.

Health areas that have been either completely ignored or poorly researched by the Project are:

- Health benefits of mountain biking vs. both acute and wear and tear injuries in assessing health outcomes
- The economic cost of injuries
- The strain of injuries on local emergency and health services
- The negative impact of mountain biking on other active and healthy recreations particularly walking and bush walking
- The gendered nature of mountain biking

¹ Draft Scoping Requirements for Warburton Mountain Bike Destination Environment Effects Statement - Environment Effects Act

- The age and physical ability range of participants in mountain biking
- The economic barriers to taking up mountain biking
- The health impacts of displacing people from their homes and communities
- The impact of mountain biking on Family Violence and violence against others

Inadequacy of The Warburton Mountain Bike Destination Project: EES Health documentation

Studies based on Walking

The EES WMBD Chapter 2 Project Rationale - 2.3.5 Health benefits assessment of the health and economic benefits of mountain biking is based on the study:

Active impacts: The economic impacts of active recreation in Victoria by Marsden Jacobs

The definition used for active recreation is:

Active recreation is leisure time physical activity undertaken outside of structured, competition sport. It is a set of activities within the wider range of physical activity options that also include active living, active transport and sport.²

The Marsden Jacobs report highlights that:

37%: Proportion of total physical activity hours spent walking - Victorians' most popular physical activity

While there is also an additional 5%: Bushwalking, bringing the "walking" sports to 42%

Adding running and hiking, two activities common on the trails in the Upper Yarra Valley that will be adversely affected by mountain biking, then that is 53% of participants.

Nowhere in the report is mountain biking mentioned. This report is in no way a review of the benefit of mountain biking and cannot be used in support of it. Although the health benefits are adjusted for injuries, the major activity undertaken, walking, is an extremely low injury activity. Mountain biking is an extreme sport. The definition of extreme sport is a sport where the participant risks serious injury. Extreme sports don't even rate a mention. How does this assess the health benefits of mountain biking?

This report also states:

We also know that the physical activity of Victorians and Australians generally declines with age, and that females of all ages generally have lower physical activity rates than males (VicHealth, 2016).

Mountain biking is a male dominated sport. We also know that it is rarely taken up by people over fifty (further elaborated on later in this submission). So it stands to reason that mountain biking is the wrong sport to chose to raise the health of those groups that need increased exercise levels the most.

The highest reported injuries for hospitalisations in "Hospitalised sports injury in Australia" are football followed by cycling at 12%. However, Cycling increases to 24% of injuries, when life threatening injuries are assessed.³

Walking is not mentioned in this report. For a good reason - it has a very low injury rate and this report is about high injury sports.

There is no separate assessment for mountain biking in this report, however, studies show that injury levels are similar for both mountain biking and cycling, with mountain biking having more injuries overall but equivalent serious injuries to cycling as discussed further, later in this submission.

However, walking is mentioned in Australian sports injury hospitalisations 2011-12. With 50% of the population walking, the injury rate was 2.5%. This number is not adjusted for per 100,000 injuries which places walking as an extremely safe active recreation.

² <https://sport.vic.gov.au/our-work/participation/active-recreation>

³ Hospitalised sports injury in Australia, 2016-17, Flinders University

The WMBD EES Chapter 2 Project Rationale, 2.3.5 Health Benefits Page 8 states:

"Exercise is proven to reduce the risk of numerous chronic health conditions, reduce disease, increase life expectancy and increase productivity. There is also evidence that suggests people who live in environments that support walking and cycling have better health than those in neighbourhoods without active transport options."

This mention of 'active transport' is not to be equated with 'active recreation'. They are mutually exclusive. This paragraph above is taken from the Warburton Mountain Bike Destination Project: economic assessment of health and recreation benefits January 2019 - which is the Appendix K, referred to in EES WMBD Chapter 2 - Project Rationale page 2. In this 2019 document, the statement quoted above referenced the study: *Genter, Donovan, Petrenas and Badland (2008) Valuing the health benefits of active transport modes* (New Zealand Transport Agency Research Report 359; Wellington)

Once again this research is inappropriate because mountain biking is not active transport and the study was based on a population that was 80% walkers and 20% cyclists (no mountain bikers) to assess its health benefits.

Once again we have a study where the largest population is walkers to estimate the benefits of mountain biking, a sport that doesn't appear in the report at all.

This Australian Transport Assessment and Planning Guidelines which is used in the EES WMBD to estimate the 10 year health benefit savings of \$47.1 million over ten years for the Warburton Mountain Bike Destination is \$1.40 per kilometre ridden (walking gives estimated health benefits of \$2.77 per kilometre). These are once again for active transport which mountain biking is not.

Some inaccuracies in this number may be caused by:

- New vs Existing users must be taken into account when measuring benefits
The rate of economic benefits of \$1.40 per kilometre is for new participants only
If mountain bikers simply come from or go to another destination that is no saving unless the new destination increases their activity and then only the portion increase should be assessed.

Also a new mountain biker who drops another sport to take mountain biking cannot.

These two scenarios do not create the same benefit as an entirely newly active person and the rate needs to be adjusted to reflect that

- Appendix K used the figure of \$1.53 not \$1.40 recommended to estimate the health benefit.

If this is the figure used it would increase the economic savings more than is warranted.

- These savings also only count if other users do not have their physical activity curtailed because of it. The mountain bikers and cyclists in our area are already obstructing the exercise of others
- Appendix K relies on Strava data for the average mountain bike trip length of 18 kilometres. Strava is trip logging software that enthusiastic riders can record their rides with and upload. Not all mountain bikers will use it and the ones that don't are more likely to be less keen and therefore have shorter trips bringing down the average
- Reduction in air pollution -
Active transport is when walking or cycling replaces car travel - mountain biking increased car travel because mountain bikers travel long distances by car to get to their remote destination and then often use constant vehicular shuttling to reach the

trail heads at the top of mountains.

- Reductions in road accidents -
when cycling and walking are off road. Mountain bikers will be making long road trips into rural areas that have higher car accident rates than the city and mountain biking has a high accident rate itself (discussed later)

Definitely no \$47.1 million in health cost savings.⁴

The economic health benefits need to be reassessed and estimated more robustly.

The Marsden report records how many hours are spent in participating in a recreation which is not the same as the number of participants.

Roy Morgan Research shows the percentage of participation of the Australian population in walking:

- 2014: 44.4%⁵
- 2017: 47%⁶
- 2019: 48.1%⁷
- 2020: 51.9%⁸

Walking participation increase by 857,000 in 2019. Mountain Biking increased by 11,000 and moved from the rounded off figure of 1.3% to 1.4% of the population. Many other sports saw a crash in their participation due to Covid.

The EES WMBD Conclusion Chapter states that the project is expected to bring benefits including:

Enhanced community access to infrastructure that encourages increased levels of physical activity as well as health and wellbeing outcomes

Assist in addressing high levels of obesity, dementia and poor mental health that are significant issues for the community

This is based on the assumption that:

1. more people who would be otherwise be inactive will move directly to mountain biking
2. that the presence of mountain bikers will not deter others from exercise
3. that mountain biking exercise will achieve this outcome

All faulty premises because

1. many will have no intention of taking up this activity and if they are fully inactive they would be better off taking up an active recreation that is not as extreme.
2. the presence of both cyclists and mountain bikers in the Upper Yarra Valley has seriously impacted the exercise of walkers here both bushwalkers and recreational walkers and these problems will increase with the increased bicycle traffic caused by mountain bikers.

⁴ <https://www.atap.gov.au/mode-specific-guidance/active-travel/5-estimation-of-benefits>

⁵ Top 20 sports led by walking, swimming and gym training, May 13 2018 Roy Morgan Research <http://www.roymorgan.com/findings/7592-australian-sports-participation-rates-among-children-and-adults-december-2017-201805110755#:~:text=In%20fact%20walking%20for%20exercise,regular%20sport%20or%20activity%20undertaken>

⁶ Top 20 sports led by walking, swimming and gym training, May 13 2018 Roy Morgan Research <http://www.roymorgan.com/findings/7592-australian-sports-participation-rates-among-children-and-adults-december-2017-201805110755#:~:text=In%20fact%20walking%20for%20exercise,regular%20sport%20or%20activity%20undertaken>

⁷ <https://www.roymorgan.com/findings/8823-australian-sports-participation-rates-june-2021-202110190323>

⁸ <https://www.roymorgan.com/findings/8823-australian-sports-participation-rates-june-2021-202110190323>

3. Brain injuries with similar symptoms to dementia can be caused by head trauma when mountain biking is a high head injury sport. Brain injury can be acquired without concussion and helmets do not protect against it.
4. Obesity can be the outcome of a serious sports injury where a proportion of individuals stop exercise. This can also be caused by car accidents and other physical trauma and by chronic illnesses that will not be cured by mountain biking. Obesity can also be caused by stress.

Health Benefits vs. Injuries

Injuries are not mentioned in *The Warburton Mountain Bike Hub - Risk Management Plan 2016*, in their *Qualitative Risk Management Assessment Dec 2019* nor in the *Economic Assessment of Health and Recreation Benefits Final Report Dec 2019*. Nor is it effectively covered in the Environmental Effects Statement Documentation recently released by the Project in relation to health outcomes.

Injuries, both the short term and the long term health impacts, are a serious problem.

5.2 million Australians suffer sports injuries per year with 500,000 (close to 10%) going on to be permanently injured, 30-40% of whom will stop playing sport because of the injury.⁹ - so reducing physical activity to the detriment of their health.

That these statistics come from a health insurer and not from the Australian Bureau of Statistics is no oversight on my part and the calls from our health industry for the government to collect comprehensive statistics on sports and recreational injuries goes unheeded.

A quote from a newspaper article:

*"How common are deaths and other injuries? What causes those injuries and what can be done to prevent them? We don't really know. Australia has no national, or even state-based, monitoring of sports injuries."*¹⁰

However, the Accident Compensation Corporation that pays for injury claims in New Zealand (a no fault basis) recorded 7,731 claims for mountain biking injuries for the year 2015/2016. This scheme was developed because private insurers in New Zealand refused to cover Adventure Tourism injuries as it was not viable. So now New Zealand taxes cover the injuries.

In the documentation for the EES the only reference to injuries is in the report on active recreation already mentioned that stated that "adjustment for injuries" has been made for their economic health benefits. However as explained earlier this report is not for mountain biking but for other sports the greater part of which are low injury activities.

When preparing a Risk Assessment based on the Australian Standard AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines it is advised under the 'important' category to include is the possibility of death and serious injuries.

The likelihood of a death caused by injuries occurring on the WMBD sometime during its life is a high probability, while serious injury will be both definite and regular. The silence on this in the risk assessment is a serious omission. Why has this been overlooked?

Mountain Biking is defined as an 'extreme' sport. The definition of an extreme sport is one where the participant 'risks serious injury'. If our medical researchers were asked to choose the sports that balance the best of fitness with the minimum of injuries we would be in a better position to get 'healthy'. And they would not choose Mountain Biking.

Casey Brown is one of Mountain Biking's top female athletes and this is what she has to say about her injuries:

*"I've broken my pelvis, lost teeth, split open my liver, broken my ribs and collarbone, and have knocked myself out," she says. "But injuries are just a part of the sport. When you're going full speed down a mountain, you're bound to slip up every once in a while."*¹¹

Types of Injuries:

There are two ways that mountain bikers commonly come off their bikes. Firstly, over the handlebars and secondly falling sideways.

⁹ Medibank Private, 2006, Safe Sports Report

¹⁰ <https://theconversation.com/better-data-reporting-will-prevent-sports-injuries-and-deaths>

¹¹ <https://www.shape.com/fitness/training-plans/casey-brown-mountain-biker-inspire-test-limits>

Falling over the handlebars is the most dangerous and the most common type of fall. It can result in HNC (Head, Neck and Chest) injuries, also injuries to the fingers, hands, arms and shoulders. These include bone fractures, dislocations and breaks, spinal injuries, concussions, paralysis, lacerations and contusions. Facial reconstruction is considered to be a particular mountain biker surgery.

Falling off sideways is less dangerous but can cause injuries to limbs and ribs, lacerations and contusions.

Apart from these injuries there are injuries to internal organs and the long term problem of injuries including osteoarthritis developing around injury sites – these can mean that injuries that seem to be resolved come back to haunt the sufferer many years in the future requiring further surgery, physio, time off work, physical restriction and pain. Brain injuries and internal injuries.

Mountainbike injuries in world-cup and recreational athletes

Himmelreich H, Pralle H, Vogt L, Banzer W

Sportverletzung Sportschaden : Organ der Gesellschaft für Orthopädisch-traumatologische Sportmedizin, 01 Dec 2007

This study investigated the incidence and frequency of injuries in mountain bike sports among competitive and recreational athletes. Participants included 106 World cup and 134 recreational athletes. Approximately 80 % of the World-Cup and about 50 % of the recreational athletes reported at least one severe injury. World-Cup downhill athletes show a more than doubled time-related injury-rate in comparison with Cross-Country athletes. Injuries of the lower and upper extremity show comparable prevalence for competitive and recreational cyclists. In the group of recreational athletes open wounds dominate, competitive athletes demonstrate a significant higher fracture-rate. Within the World-Cup athletes head injuries stand out. Despite the riding performance and the obligatory safety equipment a remarkable number of bone and head injuries results.

Australian Institute of Health and Welfare (2015)

The National Health Survey estimates that more than half a million persons carry a long-term condition as a result of a sport or exercise related injury.

This represents 24% of all persons affected by long-term conditions.

[source: National Health Survey: Injuries, Australia, 2001, Australian Bureau of Statistics, Catalogue Number 4384.0 (2001)]

It is also important to note that children, adolescents and women are both more likely to be injured and seriously injured.

Children suffer more from sports injuries than they do from car accidents

Children and Adolescents Mountain Bike Injuries:

DJ Caine, K Young, AJ Provance - Research in sports medicine, 2018 - Taylor & Francis

This article provides an overview of what is known about the scope of the injury problem affecting children and adolescent mountain bikers, the risk factors involved and injury prevention strategies. The proportion of injured child and adolescent mountain bikers ranges from 10.6% to 64.0%, but few studies provide separate analysis of youth injuries. Upper extremity injuries appear most common except among adolescents where the risk of head injury and traumatic brain injuries are greater. Concern is raised regarding the reported frequency of spine fractures and spinal cord injuries. Multi-faceted, longitudinal injury research focusing on youth mountain bikers is required to provide a reliable basis for testing risk factors and evaluating preventive measures.

Injury prevention in kids' adventure and extreme sports: future directions

Carolyn A. Emery 15 April 2018 - Research in Sports Medicine 26(sup1):199-211

Youth have very high participation and injury rates across sport and recreational activities, including in adventure and extreme sports. Sport and recreation is the leading cause of injury in youth and may lead to lower levels of physical activity, higher adiposity, and long-term consequences such as overweight/obesity, post-traumatic osteoarthritis, and post-concussion syndrome which can adversely affect future health. Injuries are predictable and preventable in youth sport, including adventure and extreme sport. Riders over fifty years old are less likely to be injured but when they are the injury is more likely to be serious.

Time to add a new priority target for child injury prevention? The case for an excess burden associated with sport and exercise injury: population-based study:

Finch C, Wong Shee A and Clapperton A, British Medical Journal Open, published online 2 July 2014.

This research sought to determine the population-level burden of sports injuries compared with that for road traffic injuries among children under the age of 15 years in Victoria, Australia.

Using data collected from Victorian hospital emergency department presentations during 2002-2010, it's estimated that the annual impact of sports injuries is between \$1.65 and \$2 billion in Australia. In addition, there is a personal 'cost' of sport injuries that is hard to measure. Injuries are a significant reason for dropout (i.e. non-participation in sport) each year, and this impacts upon lifelong physical activity habits. The Victorian Taskforce's report estimates that in Victoria alone, approximately 4,500 participants are lost to sport each year as a result of injury in five major sports: Australian Football, Basketball, Cricket, Football (soccer), and Netball. Comprehensive injury prevention strategies may help to reduce this figure.

Note: statistics for team sports are more readily available.

Wear and tear injuries and long term injuries

Wear and tear injuries that are not the result of an acute injury but can still affect bones, joints and internal organs and also have an accumulative effect. Long term injuries account for 24% of all persons affected by long-term conditions (*The National Health Survey: Injuries, 2001, Australian Bureau of Statistics*)

Among these injuries, cause for concern are:

Osteoarthritis

Joint injuries are a leading cause of osteoarthritis in Australia. 2 million Australians suffer from it. For example, research has been done on knee injuries and it is estimated that 70% will go on to develop osteoarthritis. Knee replacements caused by earlier knee injuries cost \$280 million a year (see Appendix).

Chronic Traumatic Encephalopathy

(Permanent Brain Injury caused by frequent minor shocks to the brain – not necessarily with any concussion)

CTE causes chronic headaches, severe insomnia, memory loss, disorientation and inability to control emotional impulses including depression and anger and violence against others. Those who suffer this can wind up losing their jobs, losing their marriages and committing suicide.

This injury can only be diagnosed on autopsy but the test is not a routine procedure. Brains have to be donated to a special facility to be diagnosed and that is not standard practice. Many of our AFL players have taken the decision to donate their brains and Polly Farmer is the second person to be assessed and the first to be diagnosed with CTE.

The champion BMX rider, Dave Mirren, who committed suicide at the age of 42 because of CTE is the first cyclist to be diagnosed. However, this is a highly unrecognised illness and many will have died without it being diagnosed. It is not caused solely by severe concussions, but also by minor knocks to the head and even regular vibrations and helmets do not protect from it.

It is considered cycling may prove to have the highest cases in future.

Studies show mountain biker competitors suffer regular concussions and blows to the head – however, studies show that the brain can be impacted even from regular jolting and minor knocks (See Appendix). Epilepsy and other forms of brain damage also result from blows to the head.

Scrotal and testes damage

In one study, 94% of mountain bikers had a range of five different scrotal and testes abnormalities while in the control group 16% had a single type of abnormality. Another study found 90%. It was suggested these abnormalities cause infertility and erectile dysfunction. (See Appendix)

Urethral stricture

Urethral stricture causes problems with urinating and was considered so common and disabling in cyclists that the Medical Researchers suggested finding another sport or at least limiting riding to less than 3 hours a week. Their research also found erectile dysfunction in cyclists. (See Appendix)

The Economic Cost of Injuries

Nowhere in the Economic Assessments of the Warburton Mountain Bike Destination has the economic cost of injuries been taken into account.

The very generous estimation of \$83 per day visitor does not take into account that a single broken leg costs \$4,836, a fractured arm \$3,371 and a broken jaw \$4,154 and that only includes the hospital costs, not the costs of ambulance transportation, rehabilitation services nor lost productivity because of time off work.¹²

Nor does this amount include the cost of long term problems of the injury: chronic pain and disability, further surgery required often years later because of deterioration, accumulative conditions like brain damage and osteoarthritis.

The cost of sports injuries to our health system is \$2 billion a year. Once again this does not include ambulance trips, time off work or factor in long term problems from sports injuries.

Australian sport injuries cost \$2 billion a year

– the Advertiser Michael McGuire, The Advertiser July 29, 2011

"THE nation's leading sport doctors have called for a central database to help reduce the \$2 billion a year it costs to treat amateur and professional athletes. Monash University injury expert, Professor Caroline Finch, said more information was needed on why, how and when sports participants were hurt in order to construct more comprehensive injury prevention programs."

"A spokesperson for Sport Minister Mark Arbib said the Government had no plans to" (do anything about this).

Sports Injuries in Australia

"Research suggests that over 2 million people had to take some time off work due to a sporting injury between 2012 and 2017. Half a million were forced to take unpaid time off and 178,000 had to leave the workforce entirely."

The data used in this article only reflects sports injuries which required an overnight stay in hospital. It's likely there are many thousands more which saw people discharged within a day or which only required a doctor's appointment."

<https://www.finder.com.au/sports-injuries-in-australia>

Ambulance costs

In Victoria, unless you have an Ambulance Victoria membership, concession entitlement or other coverage, you can expect to pay \$1,265 for an ambulance trip in the city and \$1,866 if you're in a regional or rural area to cover the cost. If you need transport via the sky, you'll be paying \$3,033 for a plane trip and up to \$26,852 for a helicopter.¹³

In WMBD EES Technical Appendix D Land use and planning 8.1.1 Emergency service access Page 38

In relation to emergency service access, the Transport Assessment concluded that:

If required a helicopter can be used for emergency rider crashes which is located at Wesburn Park.

Helicopter ambulance rides are between \$11,000 and \$26,852 (NIB).

If you take a median price between the two. About \$16,000. If you charged a "health" fee of \$10 to every mountain biker who came to ride it would take 1,600 to pay for one

¹² *The Surprise Costs of Common Sports Injuries, Bupa Health and Care, May 2017*

¹³ <https://www.nib.com.au/the-checkup/how-much-does-it-cost-to-call-an-emergency-ambulance-in-my-state>

ambulance ride. And that doesn't count paying for the injuries incurred, the time off work, the rehabilitation costs or any long term effects. The estimated \$85 per day tripper spent on things like shuttle buses and a pie or pizza is not looking like much compensation.

The economic cost of spinal cord and traumatic brain injury in Australia are estimated to be (in 2009):

Long term care costs were estimated to be \$300.0 million for moderate TBI and \$962.5 million for severe TBI (Traumatic Brain Injury) in Australia.

Long term care costs were estimated to be \$78.4 million for moderate TBI and \$250.7 million for severe TBI in Victoria.

Long term care costs were estimated to be \$109.4 million for paraplegia and \$500.7 million for quadriplegia in Australia.

Long term care costs were estimated to be \$29.3 million for paraplegia and \$155.1 million for quadriplegia in Victoria ¹⁴

Head, Neck and Spinal injuries are particular mountain bike injuries as illustrated in the research quoted previously and in the Appendix at the back of this document.

If you charged each mountain biker using the trails a \$10 "health" fee, it would take 96,250,000 mountain bikers to support one severe traumatic brain injury victim. Even at a rate of 221,454 visitors year after year that means it would take 434 and a half years to get that kind of money together. If you charged \$100 per user then it would take just 43.5 years. But who would pay? Is the project likely to get one severe traumatic brain injury in its lifetime? Yes.

*Mountain bike terrain parks have become a common location for MTB injuries where the overall **acute injury rate** for recreational mountain bikers is reported to be **as high as 15 in 1000 exposures** with 87% of injured riders being male. During the 2009 biking season in a MBTP, 86% of injury visits to a local emergency center were male, and 52% of cases were visited between 1 p.m. and 4 p.m. Upper-extremity fractures consisted 74.2% of all fractures, and **11.2% of all patients had traumatic brain injury**. Almost 9% of patients required transfer to a higher-level trauma center.*

If you have 200,000 mountain bikers in a year that is 300 acute injuries of which 11.2% would be traumatic brain injury. That is 33.6 mountain bikers per year when reaching the mature stage of the project. The study does not indicate the severity of the brain injuries and the "as high as" indicating that the injury rate can be lower, however, it does indicate it is not unreasonable to believe that a severe TBI will definitely happen and most probably a few.

Insurance

Our insurance industry cannot sustain the hits to it by the increase in injuries and severe injuries. As a result they are pulling out of insuring dangerous activities. New Zealand Insurance operators have pulled out of covering Adventure Tourism as already mentioned. In Australia:

Federal Assistant Treasurer Michael Sukkar said treasury was "monitoring the current insurance market situation".

"Treasury advice indicates insurance markets are becoming being more selective in the risks they will underwrite, and are imposing stricter terms and conditions on policyholders.

*"This is a worldwide phenomenon and is a reflection of the insurer and underwriter response to **the poor financial performance of this type of insurance in recent years.**"* ¹⁵

and

The impact of reduced availability and rising costs [of insurance] fall disproportionately on regional and rural businesses, and particular sectors including: adventure tourism . . . ¹⁶

and

Adventure tourism and carnival businesses and areas impacted by potential abuse claims are among the priorities in looking at cover affordability and availability problems, the Insurance Council of Australia's (ICA) says, as its new Business Advisory Council begins work. ¹⁷

and

Adventure tourism operations are shutting down after insurers refuse to provide public liability insurance

Brokers and industry representatives say such coverage is becoming "financially unviable" for insurers around the world. ¹⁸

and

Pauline Frommer, the travel guidebook writer, noted that "many insurance policies specifically exclude injuries that arise from these sorts of adventure activities, which can be an ugly surprise for travelers." ¹⁹

So if there is inadequate financial returns for the private market insuring operators then why are we not sitting up and taking notice? These are our insurance agencies saying it is too financially risky - which really equates to too personally risky.

¹⁴ The economic cost of spinal cord injury and traumatic brain injury in Australia, Access Australia Pty Ltd, 2009

¹⁵ Adventure tourism operators shutting down amid insurance refusals, ABC Mid West & Wheatbelt By Samille Mitchell and Jacqueline Lynch Wed 10 Jun 2020 at 9:27am

¹⁶ Insurance Inquiry Report December 2020 Australian Small Business and Family Enterprise Ombudsman

¹⁷ Liability issues a priority for new ICA advisory council 14 October 2021 www.insurancenews.com.au

¹⁸ Adventure tourism operators shutting down amid insurance refusals ABC Mid West & Wheatbelt By Samille Mitchell and Jacqueline Lynch Wed 10 Jun 2020 at 9:27am

¹⁹ <https://skift.com/2013/02/27/there-is-a-reason-why-its-called-adventure-travel-it-has-risks-too/>

The Strain on our local Emergency Services

In the WMBD EES Technical Appendix E Socio-economic 10.7.1 Page 53

There is some potential for mountain bike riders to be injured through falls and crashes on the mountain bike network. There are some concerns that injuries sustained at the Warburton Mountain Bike Destination will stretch the resources of the region's hospital system. RMCG has not been able to uncover direct evidence about hospitalisation rates from mountain biking injuries. However, it can be inferred from other mountain bike parks that this concern will not eventuate. Other mountain bike parks (Bright, Derby, Forrest) are located in much smaller hospital systems than that in which the project is located. RMCG has not encountered any evidence of hospital systems from these areas being stretched by mountain biking injuries.

In Chapter 12 of the EES Main Report: Socio-Economic Impacts it states:

Whilst there is potential for mountain bike riders to be injured through falls and crashes on the mountain bike network, hospitalisations for mountain bike accidents are relatively infrequent. Accordingly, use of hospitals by mountain bike riders would not be expected to stretch the resources of health services in the north east of Melbourne which currently are able to support a large urban population.

Not in Derby, the current mountain bike capital of Australia:

Tasmanian mountain bike industry shifting hospitals' focus - January 10 2020

The state's emergency departments have also experienced a spike in presentations related to mountain bike trauma, with an increase in the number and severity of injuries presenting to the Launceston General, Scottsdale and St Helens hospitals.²⁰

Mountain bikers will be having accidents on the top of mountains where access will be along steep trails. Paramedics do not climb mountains and the rescue will primarily become the responsibility of SES volunteers. It is extremely unfair to take our health services and our volunteers for granted like this.

To make matters worse it is stated in the EES Technical Appendix E: Socio-Economic Impacts that:

"As Warburton's permanent population may decrease as a result of housing stock being converted to holiday homes, the pool of local volunteers could shrink over the next 10-20 years."

Mitigation strategy for this is:

"Yarra Ranges Council work with relevant authorities to ensure that CFA capacity and medical emergency capacity are assessed to ensure that essential emergency management services are maintained."

How are they going to achieve that? No solutions are offered.

We also already have more call outs to our ambulance service than they can cope with:

TRIP The Ambos Story – 13 August 2018 Upper Yarra Mail

Referring to the overstretched services in the Yarra Valley, Mobile Intensive Care Paramedic Jason Callanan says:

"Your brother who is short of breath having an asthma attack, we can't get to him in time because we're dealing with this (an avoidable car crash). To

another. "Your baby sister who has croup, we can't get to her in time," and another, "Your mum or dad who has chest pain, or could be having a stroke, we can't get to them either, because we're dealing with this; and it's something that could have been avoided."²¹

So what will happen when those paramedics are instead dealing with Mountain Bike Casualties, something else that was entirely avoidable?

We have no hospital in the Upper Yarra Valley and no 24 hour clinic. Any Mountain biker who is injured out of hours will have to travel down to Lilydale and beyond. The hospital generally resorted to by our ambulances is Maroondah Hospital in Ringwood 43 kilometres away.

We have other feedback from the Mountain Bike Destination in Derby in Tasmania that this is a serious problem, both overstretched health services, SES struggling with climbing into remote parts of the trails and locals unable to access ambulances (feedback includes: *Minutes from the Mountain Bike Trails Forum 5/7/17 Held at St Helens Neighbourhood House Bungalow - in Appendix -* and personal correspondence from residents).

²⁰ <https://www.examiner.com.au/story/6570038/emergency-departments-evolving-with-trauma/?fbclid=IwAR2zxFYTe1ydlM2FlrKkbaS-7E7IIIsOdIwdKUNY-C7m8jMDFPIQYNPKXDII>

²¹ <https://mountainviews.mailcommunity.com.au/mail/2018-08-13/trip-the-ambos-story/>

Typical responses to problem of injuries:

- **It was bad luck**

No, it is normal

Downhill mountain bikers experience 4.5 injuries per 100 hours of biking - the very common experience of being injured in sports and recreation is not taken seriously

- **It was their choice**

Is this an admission that mountain biking is bad for the health? Choose to take risks with your health, fine, but then don't get funded and supported for the health benefits.

It is also not a choice if people are misinformed about the health benefits and if government, funds and advertises it and as a "healthy" activity. Even more so when Adventure Sports are increasingly being introduced into schools to encourage our children and youths to participate.

- **They would do it anyway**

No they won't - the mountain bikers in our region only became a problem after the preparation of the Feasibility Study and the advertising of project in the Saturday Age as the "Mountain Bike Capital of Australia" - that is, in 2015

- **Sitting on a couch all day is worse for your health**

The alternative to mountain biking is not sitting on a couch all day - it is doing a less injury prone exercise

- **They were building informal tracks anyway**

They are not informal, they are illegal, and many of them were built after the 2015 announcement of the project too; it is not a good idea to reward illegal activity

- **Change is inevitable**

Change maybe, but this change is not; it isn't just happening like a force of nature; it is a deliberate choice that is requiring lots of investment, resources and hard work - this could easily be put in other projects

- **Someone will always complain no matter what you do**

That is not a reason to not assess the project properly only an excuse to do what you please without proper forethought

- **It's safer than road cycling**

Actually it's not according to studies - it has more injuries in every single study, the kind of injuries are very similar and serious injury varies from study to study but they are neck and neck (See Appendix)

- **Your more likely to get injured in a car accident**

Not if you measure the rate per hour of time spent per person. Driving a car also has a utilitarian purpose that can be necessary to our lives - not avoidable entertainment. Also no-one is trying to sell driving a car as healthy - and that is the point of this submission - don't make health benefits the rationale for the WMBD.

- **You are more likely to get injured at home**

Not if you measure the rate per hour of time spent. Also a home serves a utilitarian purpose - we need it.

- **Other sports are more dangerous**

Yes some are - time to assess our attitude to prioritising seriously injuring our citizens for the "benefit" of their health and invest more time and money in safer ways of exercising - like walking

- **You are encouraging people to be wimps**

'Toxic Masculinity' tough guy attitudes are considered to be the major cause of violence.

Our government made it law in May 2003 that if people sign a waiver before participating in a dangerous activity they cannot sue the business operator.

In the US, legislation has been on the table for mountain bikers to be held responsible for their own injuries.

Neither of these actions will not stop injury or the repercussions to our society. It just relieves the small business operator and government of responsibility - they cannot be sued. The government (at all levels) must take responsibility for encouraging serious injury by promoting these sports. The true cost/benefit, both the health and economic, for this project needs to be assessed and the project withdrawn if it proves to be a greater detriment than benefit.

Health and Local Demographics

Investment in infrastructure that provides health benefits is crucial to combat health issues in the region. Within the Yarra Ranges area, 50 per cent of people were characterised as 'Pre-Obese' or 'Obese' in a health survey of residents in 2014 (DHHS, 2016). Fifty-six per cent of residents did 'insufficient' levels of weekly exercise (less than 150 minutes of moderate exercise per week), including three per cent who were classified as 'sedentary'.²²

The EES Report predicts the Warburton Mountain Bike Destination will encourage more local people to exercise.

However, many will not consider taking up mountain biking.

33.1% of the Shire of Yarra Ranges is over 50 years old, while 49% of the Upper Yarra Valley residents in the 3799 postcode are (*Census Quickstats, 2016, Australian Bureau of Statistics*).

Only 1.5% of Mountain Bikers are over 50 years old according to one study and 4% in another. They are less likely to be interested in an extreme sport and for good reasons as balance and muscle strength seriously declines after 50. If they get injured doing it, they will be more seriously injured than the young and fit. (Refer to Index)

Pensioners both Old Aged and Disabled are even less likely to take up mountain biking. Easy tracks and adapted bikes will only help a limited range of these people.

Based on data from the Department of Social Services for the '3799' post code area, a total of 773 individuals were in receipt of an Age Pension in March 2016 and 454 people received a Disability Support Pension. This is 1,227 out of 6,677 residents who are extremely unlikely to be able to take up mountain biking.

The 49% over 50 means when disabled are added, it is approximately 57% that are extremely unlikely to take up the sport.

Women are less likely to mountain bike as well and they are just over half the residents in 3799 – they make up the larger proportion of walkers and live longer than men, so must be doing something right. One of the reasons given for women's better health and longer lives is they are more risk adverse. certainly the amount of injuries that women have been acquiring is increasing as they are being encouraged to play traditionally male sports.

If the remaining 43% of the population are over half women there is another 22% who may not take up mountain biking, in total approximately 79% of locals, and that doesn't include those who just really don't see themselves as mountain bikers. Although some women, disabled, older people will take up mountain bike the amount will really balanced out by the many people who are just not attracted to the sport - and some. Maybe 85% of locals will not take up mountain biking. However, if 1.37% of people mountain bike, then really that is 98.63% of locals won't. Of course, the demographics change you may well wind up reversing that trend to 98% mountain bikers - not because the locals took mountain biking up, but because they moved out and mountain bikers moved in.

Will the locals love living in a mountain biking capital? Doubtful. Over 90% of residents from Derby moved out when the mountain bike destination moved in. We expect something similar to happen to Warburton. A few have already left our area in anticipation and others are considering it for the future. They are not happy about it. They are not moving out because they are delighted with the extra price their house will bring on the market. However, once they are gone, this will improve the health statistics.

The Health Assessment from the Warburton Mountain Bike Destination points out the high levels of diabetes and obesity among the Shire of Yarra Ranges, but this problem increases with age and disability – these are the very people we should be encouraging to keep moving. And the best way to get them moving is to get them walking, swimming or doing gym - not

mountain biking.

It will benefit council if our elderly and disabled leave, as non-pensioners pay higher rates and have higher disposable incomes. Many of these new home-owners will not reside in the area, but own B&B, holiday rentals, holiday homes and others will be mountain biking families. This is not a benefit to those forced to leave, those left surrounded by shortstay accommodation, when tourists interests trump residential concerns and when their friends move out and are not replaced with people who share their values and interests. All things that impact mental health. Which in its turn impacts physical health.

Many of our retired residents are highly active in our local community and their extra spare time contributes greatly to the benefit of the rest of us. They are highly valued.

Economic barriers to riding mountain bikes

Then there is the price of Mountain Bikes. In the *Australian Mountain Bike Market Profile - Survey Data (2016)* by DirtArt, it is less than 5% of mountain bike riders that ride a bike that costs less than \$1,000 and only 1.11% ride a bike that costs less than \$500. Compare that to the 18.72% that ride a bike worth over \$7,000. It is the cost of this equipment that is a large contribution towards the economic benefits of the sport. But this puts it out of the range of low income earners.

Not only are there 1,227 people on old age and disability pensions in the 3799 postcode area but there are also 202 on Carer's Pensions, 160 people who in 2016 were holders of a Low Income Card, and 347 people received a Newstart Allowance in the 3799 postcode area. That makes 1936, approximately 30% of the population who are unlikely to be able to afford a mountain bike even if they wanted to.

If these people attempt to ride anyway, it will likely be on an unsuitable and therefore dangerous bike opening them to a greater likelihood of injury. There already are charities in the local area that are assembling bikes from pieces of old worn out bikes and giving them to children who cannot afford their own. Is this a misguided idea of kindness? Are they endangering the children? What safety standards will these bikes meet?

"5 Reasons to Avoid Cheap Mountain Bikes for Riding Trails - Don't put yourself in a dangerous situation

By Francis Cebedo July 23, 2020 MTBR.com

1. *The frame and fork may break in half*
2. *Brakes will not stop you*
3. *Gears are not low enough and will not shift well*
4. *Tires and components will let you down*
5. *Assembly quality is poor"*

And then there are the people who simply don't want to Mountain Bike, which is - most. It is over optimistic to think that all of a sudden that everyone will buy a bike and get on the hills. 1.37% of Australians participate in mountain biking.

Displacement of Residents

Presently, with increased tourism our most vulnerable are finding it harder and harder to find suitable accommodation as house prices and rents rise and rental accommodation increasingly caters for short stay tourists. The local Warburton Caravan Park no longer caters for long term rentals while our streets are filling up with Holiday Rentals, B&Bs and AirBnBs. News of the Warburton Mountain Bike Destination has caused a rush of investment into developing residential properties into short stay and the trend will only increase once the construction gets underway. Already the availability of rentals has dropped to below the 2% that is considered optimal.²³ Already we have lost too many people.

Our most disadvantaged locals are being forced to move out. Local services that locate housing for the disadvantaged are moving locals to places like Moe. The health outcomes for these people will be adversely impacted by this – they are moving away from the proximity of Melbourne for services and in many cases from family, friends and other networks who live there and also from their local community and friends. Moe is heavily populated by our disadvantaged – causing an undesirable concentration.

Some rural towns have become 'welfare towns'. They rely on the portable pensions and benefits that welfare provides. They are different to 'retiree towns' where the elderly retire with enough money for a comfortable lifestyle. Both these groups no longer depend on living near Melbourne for their income. Some welfare town councils spruik government to get investment in building housing for the disadvantaged and other such infrastructure to attract these people. Others just simply have low rents. Unable to afford a home in the city many poor migrate to where they can live.

Despite Warburton's higher number of welfare dependent residents, we are not a welfare town. We have enough residents who have jobs, who run businesses or have retired comfortably to make for a mixed community. We have a large proportion of residents that are very active in the community. We are also close enough to Melbourne to allow access to it's jobs, schools and other benefits that places further away do not share.

Among our welfare dependent and low income earners are single parents and relocation to a welfare town not only means this generation suffers, it also creates huge problems for the next. Time and again, single parents find themselves cut off from services, forced away from centres that will supply them, forced away from the public transport they really need and forced to live among those with mental health, addiction problems and often the same type of violence that they were trying to escape.

Moe seriously suffers from pollution from the Power Stations in the vicinity and this is also having a severe impact on residents' health. This is what we are damning our more disadvantaged members of society to, so that our community can use residential stock for the entertainment of urbanites, who already have their own safe homes with full access to the services required to thrive.

In the Latrobe Valley where the poor are encouraged to move to (and Moe is):

AIR POLLUTION IS HARMING LOCAL COMMUNITIES

"Worldwide, air pollution is a major cause of death and disease. For example, air pollution is responsible for an estimated 29 percent of deaths and disease from lung cancer, and 24 percent of all deaths from stroke.

"Burning coal is the largest source of air pollution in the Latrobe Valley, Victoria. And within the Valley, the worst polluter is Yallourn power station.

"Yallourn coal mine and power station emits more than 30 toxic substances, including fine particles (PM2.5), sulfur dioxide (SO2), mercury and oxides of nitrogen

- Yallourn emits the most toxic mercury of any power station in Australia, more than 400 kilograms per year.
- Yallourn is the third-largest source of fine particle pollution (PM2.5), which is harmful to human health
- Communities living near coal-burning power stations are at greater risk of heart, lung and kidney diseases
- Technology can reduce this toxic pollution and save lives but Yallourn's owners EnergyAustralia haven't installed it"

References in link:

<https://environmentvictoria.org.au/yallourns-toxic-air-pollution-a-danger-to-health/>

Other renters are moving into small towns off the Warburton Highway so they can stay closer - if they can find a rental. they can afford This increases strain due to the loss of public transport (our bus services runs along Warburton Highway) and the greater distance from facilities meaning apart from school buses) they need to rely on friends or family for transport, an unroadworthy car or resort to hitch-hiking - endangering themselves, their children and other road users and causing stress on their relationships.

The loss of these people may benefit council as non-pensioners pay higher rates and have a higher disposable income - B&Bs pay even more. But where does this leave our vulnerable? This process has been going on for sometime as the amount of tourists and visitors to the Upper Yarra Valley is already too high.

The Impact of Mountain Biking on Walking

Walking is an excellent low-impact sport that is suitable for most ages and abilities. It is the most popular sport in Australia with 43.6% of Australians participating²⁴ – more than three times its closest rival – swimming. Bushwalking adds another 5%. Mountain biking account for 1.37%. Walkers do not spend as much as mountain bikers, after all they have to buy a bike, however that makes walking accessible to a wider range of people and more accessible to the vulnerable.

And yet walking is only mentioned under health benefits in the EES documentation on health as proof that mountain biking is desirable (refer page 3/4 this document).

Walkers are already experiencing an adverse impact on their exercise and conflict with mountain bikers and cyclists. This conflict of cyclists and walkers is not just a phenomena in the Yarra Ranges but is happening everywhere. The Government's response to that 'it cannot be avoided' is inadequate. *Victoria Walks Inc* is advocating for this to change.

Walking has low impact on joints and a very low injury rate. For people over the age of 75 years walking makes up 77% of their physical activity (*Victoria Walks Inc*).

Rather than increase the participation of our current residents in sport in large numbers saving them from diabetes, heart problems and obesity as claimed in the *Warburton Mountain Bike Destination Project Appendix K: Economic Health & Recreation Assessment*, and the health sections of the EES documentation, mountain biking and cycling are actually decreasing the amount of exercise many locals are getting because competing with bikes on trails is uncomfortable through to dangerous. This is particularly so for our elderly, the disabled, mothers with young children and dog walkers but impacts all walkers negatively, for many stopping them from walking altogether or limiting the times they are prepared to walk the trails. There is much discussion among locals of how this is limiting their exercise.

There is a perception that Mountain Biking is safer because it keeps cyclists off roads. The reality is that the medical research is divided over whether mountain biking is safer than cycling. Although they agree that mountain biking has more injuries, cycling and mountain biking have similar severity of injuries. Mountain bikers have more injuries per hour of exercise than road cyclists and more spinal injuries.

Injuries to walkers from bikes is not mentioned in any of the Health Assessments by the project either and such injuries are happening in Warburton both on bush tracks, the River Walk and the Rail Trail.

Although the Warburton Mountain Bike Destination Project plans to have mostly separate walking and mountain bike trails, they have dealt with this by saying they will protect "official" walking trails and then deny that the majority of our walking trails are "official". While the amount of bike traffic on the RailTrail (a favourite walking trail) is set to more than double. Which means the majority of the users on the Warburton end of the RailTrail will be mountain bikers. As the mountain bikes are also being encouraged to ride into town this will give a heavier load of bikes on both our footpaths in Warburton and on the shared paths and trails that connect to Warburton.

Meanwhile, locals prefer walking to cycling as shown in our 5km lockdown. In an article posted on the Yarra Ranges Council's website, we were informed that there was an overall 40% increase in the usage of the trails (with all the tourists gone!) and despite this increase there was 52% decrease in cycling traffic. There was no ban on bikes being used on the trails - its just that the locals prefer walking. That is a really significant statistic.²⁵

In Victoria Walks publication: *Victoria Walks, Senior Victorians and walking: obstacles and opportunities, November 2013*, it is written:

"The literature review suggests elements that make an environment more walkable, both for

²⁴ Walking (Recreational) State of Play Report April 2019 SportAus

²⁵ Trail use spikes – be a trail legend – Yarra Ranges Council – 22 October 2020

seniors and the general population include:

- good pedestrian access to shops, services, and public transport
- street connectivity
- **an aesthetically pleasant environment**
- quality walking infrastructure
- **perceptions of safety**
- well-positioned and well-designed road crossings
- traffic calming and limitations on car parking

Perceptions of safety is precisely what we are losing. We are also losing the aesthetically pleasant environment, while traffic and parking problems are an increasing worry. Walking surrounded by bikes is both nerve-wracking and unpleasant – a loss of amenity. The increases in traffic during holidays and weekends along with the filling of every conceivable space for parking makes many residents stay home.

The top ten complaints by seniors includes bicycle riders on shared paths and roads and their two highest requests for mitigation were over the problems of shared pedestrian/bike paths (*Victoria Walks, Senior Victorians and walking: obstacles and opportunities, November 2013*).

Physical exercise helps to avoid many health problems, especially for our aged:

The Commonwealth Department of Health and Ageing report "Recommendations on physical activity for health for older Australians", summarises the benefits of regular physical activity for older adults as including:

- reducing the risk of heart disease, stroke, high blood pressure, type 2 diabetes, and some cancers
- building and maintaining healthy bones, muscles and joints, thereby reducing the risk of injuries from falls
- maintaining or improving physical function and independent living
- improving social interactions, quality of life, and reducing depression

These are exactly the diseases that the WMBD Project in it's health assessment says it will cure. But a sensible look at the facts will prove that the people in most need of exercise are exactly the ones that will have their exercise curtailed.

Then there are the injuries that our walkers risk being on shared paths with bikes. The Victoria Walks Survey of 2013 showed that 40% of elderly shunned shared paths. The elderly are far more likely to fall and if they do and break a hip, between 25 per cent and 40 per cent would be dead within 12 months. I have elderly friends who will not walk the RailTrail and some have been knocked down by bikes on it – one twice. One older man had his hip broken when ploughed into by a bike rider. I also know mothers, dog walkers and horse-riders who have either stopped using the trails or curtailed how often and when they use the trails.

Despite this:

Safety issues for walkers on shared paths do not appear to have been assessed by quality research – a significant gap given that shared paths are common infrastructure (Victoria Walks: Shared Paths - Finding Solutions)

On our bush trails mountain bikes started invading after the release of the Warburton Mountain Bike Feasibility Study and the early advertising of Warburton as the Mountain Bike Capital of Australia, becoming a problem in 2015. These mountain bikers use "walking only" trails with impunity no matter how dangerous that is to walkers. When approached to inform them that the trail is walkers only we have been sneered at and abused. Signage put up by DELWP requesting mountain bikers not to use trails is pulled out, bent, graffitied or simply

ignored, so are the boulders placed over trails to stop them entering - they simply ride between or around them, jumps, ramps and berms are built into the trails which includes cutting up logs, digging earth and moving stones to either incorporate into the trail or move it away from it and the bush either side of the track is chainsawed to make it easier for them to ride down without being lashed by vegetation.

The Backstairs Track

The Backstairs track was a favourite fitness track for walkers and was heavily used by them. The trail has many advantages. It is possible to get up and down it in 30 to 45 minutes, is very steep so a good short workout but also very visually appealing. It has a carpark and Dolly Grey Park at its base an ideal spot for a sit down and a picnic. It is also an easy walk to Warburton for anyone who would like to finish their walk with a visit to a local cafe or to catch a bus. It is on the RailTrail so can be walked to. However, in 2015 it was taken over by mountain bikers. The trail is very steep, very narrow and has many blind corners. In places the track is cut into the side of Mt Little Joe and there is nowhere to step off the track to escape any oncoming mountain bike without falling into a steep gully – and that is if you see the bike in time.

Mountain bikers say they do not see walkers on the track, however, many walkers stopped walking the trail when they saw the mountain bike tyre prints only - they didn't need to see the mountain bikers. Others only needed one close call to stop. Entreaties to DELWP has resulted in no working solution and the mountain bikers are still on it today as a recent inspection revealed.

This walk is advertised at the Warburton Information Centre as one of the "Seven Walks of Warburton" enticing tourists to take their life into their hands with no prior warning offered of the danger posed by mountain bikers.

The Masterplan for the Warburton Mountain Bike Destination plans to put a second trail beside the Backstairs Track. On the map of this proposed trail it intersects with the Backstairs Track at two points. This still places the walkers on this trail in jeopardy from mountain bikers at these two points and in addition at any point (at the top, or either of these two intersections) if the mountain bikers either intentionally or unintentionally take the wrong trail.

The Backstairs Track is the only track on Mt. Little Joe that is recognised as "official", but because of its steepness and narrowness, it is the trail that is the most likely to cause accidents and the one that is the easiest to scare away walkers from even if the mountain bikers are not "allowed" on it. It would be easier to give walkers less steep and wider trails to walk, so we can see the bikes coming. Or better still, find a way to stop the mountain bikers coming down the trail - one that will work.

The Rail Trail

There are others who have stopped using the Rail Trail or avoid weekends and holidays because of the crowds of bikes on it. This may be okay for some, but people who work all week have no other option but to share the trail with bikes. In addition to this, the EES predicts that the additional mountain bikers using the trail will more than double the amount of bike traffic on it.

The trail is no longer the peaceful walk it used to be. It is necessary to stay alert, listening for bikes coming from behind and be careful to only walk along the very edge of the track, not making any move away without stopping to look behind first. I know people who have stopped walking it and others who have been knocked down on it by bikes. Those with poor hearing and those with dogs or young children who haven't the experience or sense to listen and keep to the left have extra worry and are among those to avoid the trail. I have asked many people and there are very few who haven't altered their routine because of it. The bikes also scare the horses walking on the trail and there are few that will take their horses there now. Why are cyclists being given priority over walkers? There is so much talk about how safe it is for cyclists to be off the roads but nothing about how that then makes walkers less safe.

In the WMBD Masterplan mountain bikes will be joining the rail trail to access Mt. Little Joe. There is a track going up from the RailTrail between Warburton and Hooks Road and one coming down near the Chalet. With the predicted doubling of traffic on this section of the trail, it will make this section of the trail even more dangerous and less appealing to walkers.

The River Trail

Although the River Trail is a mixed cycling and walking trail, it came as a surprise when regular walkers started seeing bikes on it a few years ago. The presence of bikes causes serious compaction, erosion and damage to tree roots where the bikes ride. This erosion causes tree root to emerge more highly out of paths creating tripping hazards. The paths are narrow and meeting bikes on them creates anxiety. In certain sections bikes have gone off track to avoid steps, creating ramps where they build up extra speed before re-entering the main path - extra dangerous to walkers.

As this reduces the amenity for walkers, many are complaining and they are also either avoiding the walk altogether or are reducing the times they will venture out on it. Of all trails this is the one that is least suited to bikes and should be reserved for walkers only. The river attracts many tourist families with small children and the elderly who come to walk around the river, swim in it and picnic and barbeque beside it. This demographic should not have to deal with bikes destroying the safety of this trail either. Whether this tourist demographic will want to visit after the mountain bikes arrive is another question. As the EES documentation says they do not spend as much money, I doubt the project cares.

The Mount Donna Buang Trails

There are a variety of walking trails on the top of Mount Donna Buang that are on Parks Victoria's website, that are well advertised and well sign posted as walking trails including on the Parks Victoria website. These trails are not acknowledged as "official" walking trails according to the project. These trails conflict with trails 45, 46 and 47 of Case 3 alternative trails. They are much loved.

The Aqueduct Trail

This trail is also much loved by walkers. Mountain bikers will be using it to access trails from the Dee Road and Yuonga Road car parks, and there trails will be zigzagging through the pines and bush either side of it. This will destroy the peace and quiet of the trail. I have enjoyed spotting the many local birds that fly around in the trees beside the trail. I doubt mountain biking will be good for our local bird watchers.

The Mt Little Joe Trails

Also much loved but like most Mt Tugwell trails, mostly considered "unofficial" despite their frequent use. These trails can be found advertised all over the web. It is heartbreaking to know that we will no longer be allowed to walk them in peace.

Mt Tugwell walking trails have mostly been ruined by mountain bikers and dirt bikers who have taken over the walking tracks and created many more trails for their own use and 4WDs - however there still are a few left worth walking.

The Warburton Mountain Bike Destination Trails

The trails that are planned for the Warburton Mountain Bike Destination will increase this process of alienating walkers. The 177 kms of trails in what is a very small area are overwhelming. I have walked the early survey markers on Mt. Little Joe, above the Aqueduct and spotted them elsewhere on Mt Tugwell and Mt Donna Buang and am I am appalled at the amount of them and at how seriously they will affect the amenity of other users even on our few "acknowledged" trails that we have left. The beauty of walking is the peace and tranquility with the sounds of birds singing. Having mountain bikers tearing around right next to you will ruin this. If screens are raised as mentioned as "mitigation", they will screen the walker from viewing the bush and ruin the walk anyway. Also, we have been advised

by mountain bikers that they have a tendency to whoop, holler and call to each other when riding - Mountain Bike Destinations are not quiet. Add to that: ecological studies show the speed of mountain bikes scare away wildlife to a degree that walkers do not.

There is also feedback from Derby in Tasmania that walkers have lost trails and amenity because of mountain bikers. The Blue Tier Walking Trails are sorely lamented.

The Impact of Mountain Biking on Local Employment

The EES Main Document, Chapter 12 Socio-Economic Impact Assessment 12.6.7.3 states:

"In 2016, the top five industries for employment for residents of Warburton and surrounds accounted for 53 per cent of all residents' employment. The top five industries include, health care and social assistance, education and training, retail trade, construction and accommodation and food services. All sectors grew between 2006 to 2016 apart from the construction sector which saw a fall in the number of employed persons in this period. The growth of the other four major sectors is potentially linked to a growth in tourism in the region"

However, the EES documentation admits that we will be losing residents and especially the vulnerable and lowly paid. It is our vulnerable, the sick, the disabled and the elderly that are major users of these health services that are the major employer. How is the loss of these 'clients' going to increase demand for health services and how is tourism linked to increasing demand for aged care and care for our other vulnerable? When the EES says we will be forcing them out of the area? On the contrary, it only stands to reason that our health services, the biggest employer in the Yarra Valley, will contract in the Upper Yarra region. Tourists do not need the kind of care provided in home to the disabled or in aged care in the area. They will require ambulance and air ambulance with minor visits to local doctors if there is one open when they are injured as our local doctors are not 24 hours, seven days a week.

WMBD-EES-Chapter-12-Socio-economic 12.9 Operation impact assessment Page 10 states:

While the impact on business of the Warburton Mountain Bike Destination would be overwhelmingly positive, there may be some negative impacts for a small number of business that are not able to adapt to changing markets and higher input costs. Some of these businesses may have owners who are ready to retire regardless of changing markets.

May have owners who are ready to retire? Like the home owners who don't mind their community being taken away from them because their house will be worth more? Like the low paid who will be happy to move to Lilydale as they will not be able to afford a house in Warburton when Lilydale is more expensive? Like the health services who will get more customers when the reality is the mountain bikers will force their customers out of the area?

I know a few business owners who are really not happy about the mountain bike destination. They see the writing on the wall if it comes. Is not being able to adapt to changing market conditions and higher input costs the failure of the business owner or is the government removing the business owners client base the failure? The higher rents are once again the gain of passive income earners like the ones that force people out of their homes - here the passive income earners will force out business owners and their employees who do the real work.

Businessmen are rarely happy to retire early due to the collapse of their successful business due to circumstances beyond their control. It often means a big cut in their income and an extended retirement period to fund. Adapting to changing markets can be extremely stressful especially if you love your business and your customer base and have no experience with and no desire for the new demographics being forced upon you. Serve the mountain bikers or get out.

More stress causing mental health problems.

Local Stress and Mental Health Impacts

Another eye opener to me is how government works: How respectful is it to come into a thriving town with a great community and turn it into a monoculture for mountain bikes, hollowing it out for tourists? The Socio-economic report talks about the most vulnerable in our community and our low income earners being pushed out. How compassionate is that? It is shocking. And this for the entertainment of a small 1.37% of mountain bikers with it's limited demographic and apparently for their good health.

People suffer extreme stress when they are forced out of their homes and then out of their neighbourhood. Moving is stressful, however if you have chosen to move and you are moving onto something better or at least as good it is less so. If you have no choice over the matter because your landlord has evicted you or because the amenity of your neighbourhood has seriously deteriorated, it is a different matter. To then have to move somewhere worse is even more stressful and depressing.

To have someone more powerful come in and destroy the things you treasure is bad for mental health, and poor mental health is linked to poor physical health - including the obesity and dementia that the mountain bike destination is promising to cure. If you then have to move to a neighbourhood away from supports, friends and family and/or away from services, then the poor mental and physical health outcomes are compounded.

Symptoms of Stress Include:

The symptoms of stress may vary. However, the most common symptoms are:

- Anxiety
- Insomnia
- Migraines
- Dizziness
- Headaches
- Depression
- Weight gain**
- Hypertension
- Heart disease
- Rapid heartbeat
- Shortness of breath
- Tension
- Poor memory
- Issues with concentration²⁶

I know people who are suicidal over this project, people who have had nightmares, people who are very distressed, people who are extremely angry, people who cope by saying that the project won't happen-denial. These people's concerns should not be dismissed as the **EES WMBD socio-economic report proves that they are absolutely warranted.** Warburton instills a great deal of love and attachment in its residents - both for its environment but also for its community.

It will never be respectful to bring a monoculture into a thriving town, to take over its residential homes, take over its streets, take over its mountains. It will never be respectful to hand whole towns with well functioning communities to be remade by male dominated extreme sports. That is abuse under the pretense of helping others, actually disenfranchising

26 <https://byjus.com/biology/causes-of-stress/>

the locals. Here the winners are males in their thirties and forties who mountain bike and anyone they can encourage to join them and the losers are predominantly female, elderly, disabled, the poor and pursuers of any other activity that might get in the WMBD's way.

Definitely not good for physical or mental health.

The Australian Bureau of Statistics reports that:

Anxiety and depression rates continue to creep upwards, according to the Australian Bureau of Statistics' (ABS) National Health Survey: First Results, 2017–18.

The survey found increased rates of mental illness in several areas:

Around one in eight adults (13%) experienced high or very high levels of psychological distress in 2017–18 – an increase from 11.7% (or 2.1 million adults) in 2014–15.

One in five Australians (20.1%) reported a mental or behavioural condition in 2017–18 – an increase from 17.5% (four million Australians) in 2014–15.

Around one in eight Australians (13.1%) had an anxiety-related condition in 2017–18 – an increase from 11.2% in 2014–15.

One in 10 people (10.4%) had depression or feelings of depression in 2017–18 – an increase from 8.9% in 2014–15.²⁷

Add Covid 19 - things have not got less stressful than that.

Medical researchers are increasingly realising the strong link between stress and obesity and other medical conditions:

The inflammatory consequences of psychologic stress: relationship to insulin resistance, obesity, atherosclerosis and diabetes mellitus, type II.

Black PH.

Med Hypotheses. 2006;67(4):879-91. doi: 10.1016/j.mehy.2006.04.008. Epub 2006 Jun 15.

Stress mechanisms and metabolic complications.

Kyrou I, Tsigos C.

Horm Metab Res. 2007 Jun;39(6):430-8. doi: 10.1055/s-2007-981462.

Chronic stress and obesity in adolescents: scientific evidence and methodological issues for epidemiological research.

De Vriendt T, Moreno LA, De Henauw S.

Nutr Metab Cardiovasc Dis. 2009 Sep;19(7):511-9. doi: 10.1016/j.numecd.2009.02.009. Epub 2009 Apr 11.

"Consolatory eating" is not a myth. Stress-induced increased cortisol levels result in leptin-resistant obesity.

Björntorp P, Rössner S, Uddén J.

Lakartidningen. 2001 Nov 28;98(48):5458-61.

27 <https://www1.racgp.org.au/newsgp/clinical/mental-health-issues-increasing-among-australians#:~:text=The%20latest%20ABS%20National%20Health%20Survey%20has%20revealed,reported%20a%20mental%20or%20behavioural%20condition%20in%202017%E2%80%9318.>

The Impact of Mountain Biking on the Perpetration of Violence

The relationship of violence and sport has been becoming increasingly in focus over the past decade. Although no research has been done on violence in mountain biking specifically, this does not mean it does not exist.

Andrew Swann stated the mountain bike Destination will reduce family violence in a speech he gave to council in September, 2018, without backing up this claim with any evidence.

How will encouraging men to be tough, to injure their bodies and be proud of those injuries reduce violence? A perusal of mountain biking videos on Youtube will illustrate the point.

If there is no specific research on mountain biking there is research on athletes compared to non athletes:

"The reviewed research indicates higher rates of alcohol use and violence in athlete populations when compared against non-athlete populations. Masculinity, violent social identity and antisocial norms connected to certain sports stand out as potential factors that may impact the association between sport and violence in athlete populations."²⁸

In Victoria, intimate partner violence contributes to more death, disability and illness in women aged 15 to 44 than any other risk factor.²⁹

Team sports have had the most research done on both player violence and audience violence. Several studies have researched the increase of violence after sports events.

Violence spikes at a 40.7% increase within a 12 hour window of a State of Origin Rugby game. Non-domestic violence is even worse with an increase of 70% in the same window.³⁰ (NSW Bureau of Crime Statistics and Research).

Spikes in family violence have also been recorded after the AFL Grand Final, the Melbourne Cup, the World Cup Soccer and even the much smaller Calgary Stampede and the Grey Cup in Canada.

Lancaster University studied domestic and family violence during the World Cups in 2002, 2006 and 2010 and found a 26% rise in domestic assaults when England won or drew, and a 38% jump when the team lost. Domestic violence incidents were up 11% the day after an England match.³¹

A three-year study showed that while male student-athletes make up 3% of the population on college campuses, they account for 20% of sexual assaults and 35% of domestic assaults.³²

A paper "Sex Crimes on Campus" came to the conclusion that:

"a disproportionate number of campus gang rapes involve fraternities or athlete groups."³³

It is well documented that male cultures that encourage tough guy stereotypes (characterised as 'toxic masculinity') are more likely to have higher violence and family violence than ones that don't. Among mountain bikers this is the precise culture that is encouraged.

The YRMTB – Yarra Ranges Mountain Bike Association has an 83% male membership. The

28 The association between sports participation, alcohol use and aggression and violence: A systematic review Anders L. Sønderlund Kerry O'Brien Peter Kremer Bosco Rowland Florentine De Groot Petra Staiger Lucy Zinkiewicz Peter G. Millera

29 <https://www.thelookout.org.au/fact-sheet-1-family-violence>

30 *NSW Bureau of Crime Statistics and Research*

31 <https://regnet.anu.edu.au/news-events/news/7190/whether-teams-win-or-lose-sporting-events-lead-spikes-violence-against-women>

32 Woods, Ronald (2011). *Social Issues in Sport*. p. 424. ISBN 9780736089821.

33 Simmons, K (February 17, 2003). "Sex Crimes on Campus". *Atlanta Journal Constitution*.

The very popular website where thousands of mountain bikers log their rides, records 94% of Australian mountain bike trail usage is by males.³⁴ This statistic is useful because it logs actual trail use by probably keener riders and not just membership of a club, where a member could be anywhere from less engaged than others to totally inactive and with one statistic giving 28% of female members of MTB clubs being between the age of 0-9 there is also some question of how accurately the female membership numbers reflect the true choice of women.³⁵

The Shire's Gender Equity department are in the process of applying their '*Gender Equality Act 2020*' however their attitude to sport is simply to encourage women to join male sports. Is this really for women? Are men assuming women want to be like them? Was this properly assessed? Or is this to justify spending so much money on men's interests? A rubber stamp? The proper approach would be to ask women what they want and one way to do that is to support the sports they already participate in.

The council's own program, '*Modelling Respect and Equity in the Shire of Yarra Ranges*', stresses the need to discourage 'Toxic Masculinities' but then Council turns around and promotes this sport which encourages precisely that male culture.

It is difficult for women to talk about violence perpetrated against them. The tendency in our society is to be more upset that a man is accused of violent behaviour than if a woman has been violated. The reaction is most commonly to believe the woman is lying, exaggerating, being 'hysterical', a whinger or weak. She is blamed for complaining. The #metoo and #LetHerSpeak movements arose out of the frustration of the silence forced upon the abused. The result has seen abusive men like Epstein, Weinstein, Nassar and others prosecuted. The Victorian Royal Commission into Family Violence and the appointment of Rosie Batty and Grace Tame as Australians of the Year gave hope that the tide is turning. However, we have a long way to go.

Favoring male sports on such a large scale is proof we haven't learnt. The push for 'adventure tourism' encouraging mountain biking, dirt biking, 4WD driving and hiking has seen an explosion of these activities being funded. All of these sports have predominantly male participants and are adventure/extreme sports that encourage a certain kind of attitude.

Just in our local area there are Mountain Bike Trails at Lake Mountain, Marysville (including one joining them together), Buxton, Toolangi, Warramate and Mt. Evelyn. Mountain Bikers are encouraged to ride the O'Shannassy Weir Trail, the Ada Loop and the Starling Gap Loop and there are trail bike trails that stretch over 30 kms of trail from Powelltown to Neerim South and to East Warburton and Big Pat's Creek.³⁶

We, residents, are familiar with many of the mountain bikers that either live locally or are involved in the project and mountain biking in our area. They have been building illegal trails (called informal trails in many government publications) and they are happy to talk openly about it, even boast. They have also repurposed walking trails, building in their features and making them unsafe for walkers. They bully and harass walkers and anyone who expresses reservations about the Warburton Mountain Bike Destination. They know they should not be using the Backstairs Track but their attitude is "What are you going to do about it?" and keep using it. They treat people who facilitate their desires very well. However, it is too bad if your welfare conflicts with their sport.

Mountain bikers regularly remove all signs placed to discourage them on Mt. Tugwell and throw them in the bush or simply ignore them riding right passed. When DELWP places rocks at the entrance to their trails with signs requesting them to stop, they simply ride between or around them as mentioned previously. That's abusive behaviour.

One of my friends has been seriously injured and hospitalised by a physical attack from a

³⁴ <https://www.trailforks.com/ridelog/>

³⁵ Mountain Biking in Australia: An Economic and Participation Analysis

³⁶ <https://www.melbourneplaygrounds.com.au/neerim-south-latrobe-trail-bike-visitor-area#.YfISN-Lviu00>

mountain biker. He identified her and called her a "bitch" before running her down, including riding across her head. There is no doubt it was deliberate. She on the other hand, was just out for a walk and didn't recognise who he was.

Our members have been "buzzed" when out walking on back roads - mountain bikers in cars drive close to terrify us. They have wound down their windows and abused us. We have been threatened by mountain bikers not to go out alone on the mountains because we will not be safe if they meet us there. This may be usual in something as divisive as taking over a town, however there are difference. Violent and aggressive behaviour started before most of us knew there were to be a Mountain Bike Destination and none of us would have dreamed of threatening mountain bikers in the way they threatened us. Also, it is our women who are threatened and are threatened by men.

The abuse we have endured has been really eye-opening for me. I would never have expected it. The worst threats have come from businessmen with families and often with investments in the Project's success - not teenagers playing up. The worst threats have been against women who have stood up against the project or the danger of mountain bikers on walking trails. Three women were physically threatened by one middle-aged mountain biker at a public meeting November 2015. Three separate incidents.

When we found out about the project in 2018 many of us spoke on local public FB forums, but although many supported our stand, we were piled on by mountain bikers and their supporters very aggressively. They told us to get off the public forums and ridiculed us no matter how polite we were. We were told we were liars even when we referenced official documents. We were told we were trolls just for saying we do not want Warburton to be the Mountain Bike Capital of Australia.

The Rethink Warburton Mountain Bike fb group has been so seriously targetted for abuse that its had to purge membership and insist all new members had a recommendation from a current member, which effectively kept the group small. The Rethink website has also had attacks on it.

The project itself is a violence in its aggressive displacement of:

- residents from their homes and neighbourhood
- other users of the bush, reserves and the local towns from their activities - both residents and tourists
- employees from their jobs in health care
- businesses that rely on the current customer base
- whole demographics that do not fit the profile of a mountain biker.

All simply dismissed in the socio-economic section of the EES WMBD reports.

The claim by Andrew Swann and also in funding applications written by the Project that the Warburton Mountain Bike Destination will reduce violence against women is unsubstantiated and ill conceived and is best removed as a benefit of the Warburton Mountain Bike Destination Project.

Power imbalances

Your average mountain biker is male, between the ages of 30 and 50 and has money.

The favouring of this demographic is not random.

Men of this age are in positions of power and influence and are able to push their interests. They are also more likely to have the money that attracts others to want to invest in their interests.

The Upper Yarra is not the only place to get mountain biking trails. Trails are being built all over Australia, along with trail bike trails and four wheel drive trails. There are distressed residents from Queensland, Tasmania, New South Wales, Western Australia and other Victorian areas where mountain bike trails exist.

This project advantages this powerful demographic to the detriment of others and they are using their power to influence the young to get involved through school programs. This is a problem for our society. Things get done that privilege the powerful and disadvantage the ones who are not.

The business opportunities and jobs will privilege only certain businesses many of them that will not have owners living locally and will be built around an introduced mountain biking and cyclist monoculture of men predominantly from urban areas.

Our current tourists are families with children and elderly members. They are also extremely multi-cultural. Although many pack picnics, they are more likely to use our local cafes than road or mountain bikers who prefer pies or pizza but leave more upmarket cafes alone. Our current mix means that a far broader range are benefitting from the recreational benefits of our area.

Derby Mountain Bike Trails

Derby is currently the biggest Mountain Bike Destination in Australia and is so often promoted as an example for what the Warburton Mountain Bike Destination can achieve. However, just like us, opposing voices are often silenced or pushed into the background and to find them you must push past the mountain biking hype.

An article was printed in the local newspaper, *the North East Advertiser*, 21st February, 2018, outlined the problems the locals were having with the mountain bikers. The opening line to the article is:

MONDAY night's Dorset Council meeting was held at the Derby Town Hall in front of a packed gallery of locals, eager to voice their concerns about the town.

It went on to list some of the problems residents were experiencing:

- lives turned upside down
- mountain bikers treating the area like Disneyland not people's homes
- no proper consultation with the residents
- issues not being addressed
- inadequate infrastructure
- campers lighting fires
- rubbish
- excessive noise
- thefts
- misuse of footpaths
- animal safety
- parking issues
- it's like living in the Wild West
- feels like an invasion
- some businesses losing custom

Mayor Greg Howard in answering said many of the problems were "police matters" and not the problem of the Council. Police matters. These concerns create a great deal of stress for the residents.

A further article from the North West Advertiser is about the strain on the sewerage system caused by the mountain bikers.

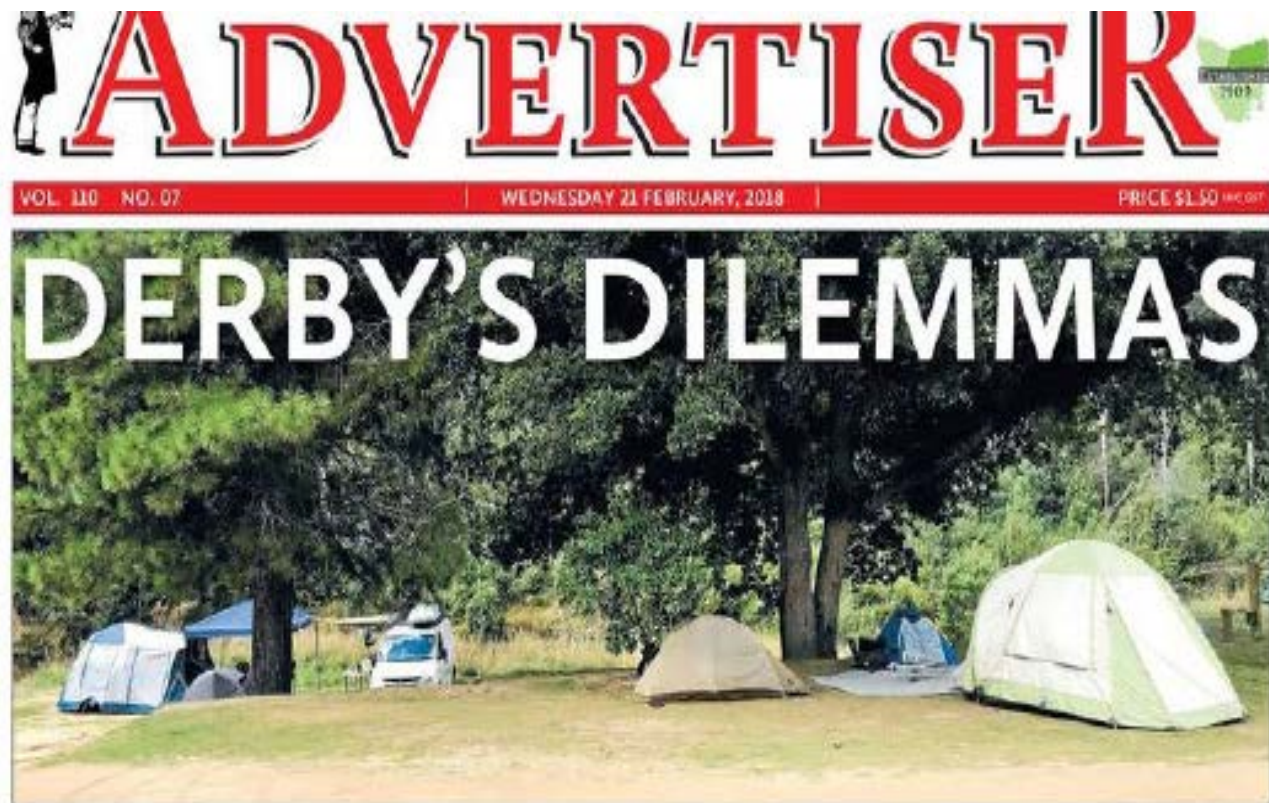
Minutes from another meeting: the *Mountain Bike Trails Forum*, 15/7/17, included issues:

- illegal trail building
- economic benefits were over-estimated and did not come to pass
- housing affordability skyrocketing
- Too many AirBnBs
- **the stress on health services, including ambulances: locals have no ambulance service when they are attending to mountain bike injuries**
- urinating and defecating on tracks
- **'ratbag' element among mountain bikers**
- **conflict between novice and advanced riders scaring novices off trails**

- **bike trails too difficult for novices - designed for 'adrenalin junkies' with expensive equipment**
- rates hike
- public money being spent on trails
- council considering selling off assets to fund trails
- ongoing trail costs are \$1,000 per kilometre per year to give mountain bikers free rides
- concerns over environmental impact including phytophthora contamination
- **diversity in the community suffering**
- **Friends of Blue Tier walkers have lost access to their trails**
- **Areas previously walking trails are now overrun by mountain bikers**
- Ecological degradation

(Bolding mine)

We are already experiencing most of these problems with the deluge of tourists we are already dealing with, we don't need more.



• Residents of Derby expressed to Council that there were many issues not being addressed since the mountain biking craze imploded in their once quiet town.

By TAYLOR CLYNE

MONDAY night's Derby Council meeting was held at the Derby Town Hall in front of a packed gallery of locals, eager to voice their concerns about the town.

Mayor Greg Howard opened up public question time and Derby residents' hands shot into the air, all looking to explain their issues which they believed had previously fallen on deaf ears.

40-year resident Terry Smith stated that the mountain biking craze had turned their lives upside down over night.

"This is our home and the people who come here don't treat it like their home, they treat it like Disneyland," he said.

"There are many issues that are not being addressed, and no proper consultation has been made with the residents."

"I don't think you (Council) realised how many people were going to come here. The infrastructure isn't adequate, there are a lot of

unhygienic practices going on in camp sites," Mr Smith explained to councillors.

Residents explained that issues are happening in the town on a daily basis and wanted someone to police the adequate rules.

Anne Dursten spoke on behalf of residents who had major complaints about campers and their practices along the river and in the park, fire, excessive rubbish, thefts, animal safety, misuse of the footpaths, parking issues and more.

"It's like living in the wild west," she said.

Derby Horse owner Virginia Wells said it felt like an invasion and wanted to know what consultation had been made with business owners before meeting the new parking signs and yellow lines down one side of the road.

"People don't stop now, they just keep going because there is nowhere in park," she said.

General Manager Tim Watson was absent from the meeting due to illness. Mayor Greg Howard answered on behalf of Council and took some questions on notice too.

"I don't disagree that there are issues here, we

were caught on the hop a little bit so we didn't think Derby would take off as quick as it has," Mayor Howard said.

"We understand there is a need for more showers and toilets and that infrastructure plan will need to be brought forward."

"Councillors have workshopped a number of issues already and are currently in the process of replacing the rubbish bins around the park with a more adequate sized rubbish capacity."

"We will be constructing permanent fire pit facilities in the park and plan to liaise with Tasfire about adequate signage in times of high fire danger and total fire bans," he said.

In relation to Council providing a camp vendor, Mayor Greg Howard explained that a lot of the issues raised were actually 'police matters'.

"If you have people acting illegally, like you've described, you must contact police. Council have no jurisdiction," he said.

"When you introduce something new into a town there is bound to be considerable change and that change is inevitable."

"Despite the massive benefits that bikes have created for the North-East, there will always be people who don't appreciate the disturbance to their current lifestyle, and therefore don't want any change."

"It is Council's role, whenever possible, to minimise the effect on local residents given that change is inevitable," Mayor Howard said.

Resident Terry Smith said he believed that something positive would come out of the meeting.

"I think some of the information surprised councillors, all the little things add up over time and I hope we can find a solution moving forward," he said.

Councillor Dale Joseph thanked the residents for their input.

"You have enlightened councillors here tonight, you can be sure that the concerns you've raised tonight will be followed up," Cr Joseph said.

Mayor Howard agreed that more community consultation would take place in the near future.

Fire Risk

If a bushfire occurs, the many mountain bikers are out remotely on the very mountains that will explode with fire. If this happens this will cause death and injury. It will cause a great strain on any evacuation. It is reprehensible to invite a projected 5,000+ mountain bikers per week in addition to other visitors and our locals, into our highly fire-prone area. Then to have Mountain Bikers scattered throughout the mountains on trails isolated from easy contact where they will be incredibly vulnerable. Evacuation off the mountains and on our narrow roads with only one decent road out with a narrow choke point on Warburton Highway is highly problematic. This choke point, called "The Narrows" by locals is on the side of the highly fire prone Mt. Little Joe and is edged with highly fire prone vegetation. A single tree down or fire on Mt. Little Joe (which is the usual behaviour of fire in the Upper Yarra Valley - it is rare for Mt. Little Joe NOT to go up in flames. When this happens, the highway is closed).

The Warburton Mountain Bike Destination Project Bushfire Assessment Report for Environment Effects Statement (EES) Appendix G: 8.1.1 Page 38 supposedly offers a management strategy for Bushfire risk. It admits we are in an extremely dangerous bushfire risk area and also admits that mountain bikers will be out on isolated trails and not within easy access of local townships. The solution is to close all trails on Code Red fire danger alert days and possibly on Very High and Extreme days. Where did Severe go? At least this is better than the earlier 2020 document that stated that the more remote trails would be closed on Code Red, High and Very High Days. They lost Severe AND Extreme However, that earlier document contradicts itself later stating the remote trails will close on Extreme and Code Red days only.

So how does Parks close trails on Code Red Days - it puts a notice on its website. There are few gates that can be closed, very few. If the shuttle buses stop operating that is not a problem. Mountain bikers shuttle up Mount Tugwell all the time. Observing how impossible it is to stop mountain bikers accessing the trails already I doubt this will work. Mountain bikers make trails around gates and other infrastructure designed to keep them out. The Plan also suggests signage would help inform mountain bikers - however our experience of mountain bikers is that they ignore and vandalise signs. 5000+ mountain bikers a week?

Failing that, in the earlier document the mountain bikers were to be evacuated to our Fire Shelters or Neighbourhood Safer Places. Our two Fire Shelters hold just 297 and 380 persons each in an area of over 6,000 residents. Add tourists and you have a disaster. Can you imagine the bun fight outside as everyone tries to get in?

Locals asking tourists if they checked the fire ratings before visiting has revealed that most simply don't. So relying on them to know before coming up is not going to work. We also find them very unaware of fire danger. They often don't know that they are not allowed to light a fire in total fire ban days.

Scenic Warburton Bushfire Risk Highest in Victoria

This article highlights the fire risks of living in the Upper Yarra Valley that makes it clear that an extra load of tourists here will make things far more difficult:

<https://www.abc.net.au/news/2016-01-19/scenic-warburton-bushfire-risk-among-highest-in-victoria/7097676>

And so does this video put out by the CFA which discusses all the issues that residents worry about particularly with a large extra population of tourists, with extra mountain bike riders needing to not just be evacuated but to be evacuated off remote locations on the mountains among dense bushland.

CFA Know Your Risk Yarra Valley video

Some quotes from the video:

"(Launching Place, Warburton etc) . . . it's time and distance so it can take some time for us to get to some of those places. All of those places are at high risk of bushfire.

"This area is very dry, it is very prone to bushfire. We are very vulnerable because we just have one highway going in and going out. Egress is an issue if there is going to be a fire.

"With traffic issues already on the Warburton Highway and many houses surrounded by dense bushland, getting 12,000 people out of here in a hurry if a major bushfire hits is one of our biggest challenges and biggest concerns.

There is also a section where a fire truck has to cross onto the wrong side of the road on a narrow bend because there are road bikes riding multiple abreast blocking the entire left hand side of the road.

This video features Forest Fire Management Victoria Chief Fire Officer Chris Hardman on January 17 at 2:43 PM in which he says:

"Surprisingly for me we are still finding that even where we have a Total Fire Ban people are still lighting camp fires. That is irresponsible and it can lead to devastating bush fires which impact rural communities and could impact people's lives."

It doesn't surprise us. As locals we are often putting out fires left by tourists - especially the trail bikers and mountain bikers on Mt. Tugwell. It is truly frightening in the high fire danger period - and in an area so fire prone that when the government decided to build three fire shelters in Victoria in the most fire prone areas they decided to put two of them here. Two out of three in the whole of Victoria!!

When a fire starts in our area on a hot day, panicking residents clog the roads trying to get out. While our only road out is vulnerable being on the slopes of Mt Little Joe at this point at the exit from Warburton and Millgrove - a highly fire prone mountain and one that fires have regularly started on. We all know here that if Mt. Little Joe goes up in smoke we are trapped in or trapped out.

Smoke inhalation will be another hazard for mountain bikers. When the 2019/20 fires burned we were not under attack from fires, however, we did have to shelter inside for days to avoid the smoke inhalation. We have the same instruction from authorities every time we have a planned burn in the area. Which is generally at least one a year. Which burn on the most perfect autumn days. There is a Mt. Little Joe Burn planned for 2022, another for 2023, two Mt Tugwell burn for 2024.

So Summer/Autumn fire danger, Autumn/Winter smoke inhalation danger and Winter/Spring the trails will be too wet. Add landslips, rockfalls and storms with fallen trees and tree limbs and there are quite a few extra health hazards.

I am happy to leave the area when the fire danger is too high, not be on the trails when it is too hot, to stay indoors when it is too smoky, to not go out on the trails when it is too windy, to avoid getting off trails into the bush because of the tiger snakes that are rampant up here and the mining shafts and adits that are hidden in the vegetation or about to give way under your feet, would never light a fire in the bush and stay away from trails when they are too wet. You would be amazed how many locals do all sorts of things that make them safer than a tourist could be. Tourists do not have a clue because they just don't have the experience.

Dangers from Old Gold Mines

Our mountains are heavily undermined due to early gold-mining activities in the area. They are pockmarked with mine shafts that drop down to subterranean tunnels. These mine shafts are often overgrown with vegetation, so are completely unrecognisable to anyone travelling through the undergrowth. The accumulation of debris in these shafts is called a 'false bottom' because of the appearance of solidity.

Also, because of the undermining, subsidence can happen in a flash and a hole can appear out of nowhere - even in the middle of a path. Mt Tugwell, Mt Little Joe and Mt Donna Buang are riddled with them. These mine shafts can be up to 40 metres deep in our area. The impact of falling down that deep is horrific. The bottom may be solid rock but it can also be filled with freezing cold water that can drown the person who falls down it or cause hypothermia. There is also a problem with noxious gases that can make it even more dangerous. These problems also cause a great deal of danger to rescuers, too.

Most of these shafts are uncapped and the ones that are capped using wire mesh, the mesh is rusted and deteriorated.

The timbers supporting the rooves of the tunnels rot away and the roof of the tunnel caves in, sometimes in layers until there is only a thin crust of soil, gravel and stones on the surface. This means seemingly solid areas may look safe but aren't. Particularly vulnerable areas are the shafts' "collar", where the ground up to ten metres away from the shaft can collapse.

References: (<https://www.dmp.wa.gov.au/What-makes-old-mine-workings-3210.aspx> and local knowledge)



A mine shaft revealed after a controlled burn on Mt Little Joe

Below is a newspaper article about a trail biker that fell down a mineshaft. There are many such incidents throughout Australia where mining has been carried out and frequent falls into mine shafts in our area (including pets).

'The pain was unbelievable': Trail bike rider who fell 10m down a mine shaft to sue – Sydney Morning Herald, July 5, 2020.

Here is a quote:

"Even in hospital, they were giving me all these drugs and I was screaming all night," he said. "I'm in pain all the time, it's like torture."

'Mr Osborne said his specialist has told him it's unlikely he will be able to return to work as a concreter nor ride trail bikes with his children again.'

Although Biosis in it's VicHeritage report claims that trails will avoid gold-mining features, do mean underground tunnels too? Not visible from the surface where seemingly solid ground

is? There is also no guarantee that mountain bikers will stay on trails - in fact it is extremely unlikely. Experience from other Mountain Biking areas show that mountain bikes both build new illegal trails and also explore off track. They will be out on the mountain and they are the kind of people who take risks.

Mine Tailings also have high levels of arsenic and mercury that are still a problem years after. These tailings are also dotted around our landscape. (*Are you living in an area with mine tailings?* - *Health.vic*).

Storm Damage & Landslips

Storm Damage

The Upper Yarra Valley is regularly hit by high winds. Walking in the bush after such a storm, trails are covered with fallen trees and other storm debris. This is not an immediate concern for walkers who can walk around, step or climb over or simply turn around and go back, but for a mountain biker travelling at speed the hazard of a tree down or debris across a trail after a blind corner or below a rise is life threatening. Our locals also know to never be out on the mountain in windy weather, but we also know tourists are ignorant of this.

The cost of cleaning up trails and the urgency with which they need to be kept clear is a problem that the Project has not solved yet (as discussed under "Economic Benefits").

Landslips

Another hazard to health are our serious landslips. These slips occur on all our mountains every year.

Two years ago a serious slip happened on Mt. Donna Buang Road, on the downslope, undermining it (In photo right). As you can see part of the road surface is hanging in thin air. The shoulder of the road collapsed. Traffic to the top of the mountain had to be stopped completely initially and then a set of lights were set up to reduce traffic to one lane. This is not a back road, it is the main tourist road to the Mt Donna Buang summit from Warburton. It is still not repaired.



The back roads to the summit are worse. There were three landslips on the Healesville – Mt Donna Buang Road between Panton's Gap and the 10 mile Car Park in one wet weather incident last year. This is a less developed road than the Mt Donna Buang Road from Warburton often closing over winter. However, the Drop A K, 37 km mountain bike trail will be built following along this road – just above it. Here is one of the slips:

<http://m.ewn.com.au/traffic/road-closed-donna-buang-road-372105.traffic?fbclid=IwAR0MO5Wx7PsOSD313M2tCfiuB-js3TS9WCor2H5kInuAGRYQJB7HxZonbYctr>

The Warburton Mountain Bike Destination Geotechnical Assessment 2019 points out this is the Trail most likely to suffer from landslides and calls for further assessment of the area. The trails above the O'Shannassy Aqueduct and trails on Mt Little Joe are also among the most prone: Trails 1, 2, 5, 11, 17, 18, 19, 20, 21, 22 and 23. A quote from the Assessment:

Some of the project components are contained in areas of land which are susceptible to landslip. A number of geotechnical studies have been undertaken and parts of the trail network traverse parts of the Yarra Ranges Erosion Management Overlay (EMO). All land included in the EMO has been identified as having a sufficiently high risk of potential instability to warrant specific review of these risks. - Warburton Mountain Bike Hydrological & Geotechnical Report - introduction page i

While the EES WMBD Technical Report B - Surface water, groundwater and geotechnical hazards states:

All land included in the Erosion Management Overlay has been identified as having a sufficiently high risk of potential instability to warrant specific review of

these risks prior to the issue of a planning permit. The control of environmental factors and development such as vegetation cover, drainage, rock and soil disturbance and effluent and stormwater disposal are important in managing of risk of landslide

Still no decision on the safety of the trails in the EMO areas (which are substantial and on all mountains). Just the need for a specific review.

The Mount Donna Buang Road has its dangers even without landslip. We regularly hear of tourists going off the side of the narrow and slippery road into the bush on the steep downslope.

Conclusion

In conclusion, we suggest that:

the project do a more robust health report

- that does not make unsubstantiated claims about health benefits
- that does not use inappropriate references to sports/recreations that are not equivalent
- that properly assesses the risks as well as the benefits of mountain biking
- that from the inception collaborates with our medical and fire services in discussion and the planning of the project
- that supplies honest risk assessments from the beginning of the project to funding bodies and others including the risk of injury and fire risks
- that assesses whether the sport has wide appeal across all segments of our society rather than appealing only to a limited demographic
- that properly assesses the current recreations and sports available in the area and how the displacement of these sports will affect health outcomes
- that properly assesses our current tourist numbers and culture and how the displacement of them will impact their health and wellbeing
- that properly assesses the impact of displacement of residents on their health and wellbeing
- that offers robust mitigation and not just suggestions that are often ill conceived

Appendix

Research Papers with Summaries:

Studies on the prevalence of serious injuries in Mountain Biking:

Mountainbike injuries in world-cup and recreational athletes

Himmelreich H, Pralle H, Vogt L, Banzer W

Sportverletzung Sportschaden : Organ der Gesellschaft für Orthopädisch-traumatologische Sportmedizin, 01 Dec 2007

This study investigated the incidence and frequency of injuries in mountain bike sports among competitive and recreational athletes. Participants included 106 World cup and 134 recreational athletes. Approximately 80 % of the World-Cup and about 50 % of the recreational athletes reported at least one severe injury. World-Cup downhill athletes show a more than doubled time-related injury-rate in comparison with Cross-Country athletes. Injuries of the lower and upper extremity show comparable prevalence for competitive and recreational cyclists. In the group of recreational athletes open wounds dominate, competitive athletes demonstrate a significant higher fracture-rate. Within the World-Cup athletes head injuries stand out. Despite the riding performance and the obligatory safety equipment a remarkable number of bone and head injuries results.

Spinal Column and Spinal Cord Injuries in Mountain Bikers: A 13-Year Review

Emily R. Dodwell, MD, Brian K. Kwon, MD, PhD, Barbara Hughes, MD, MHSc, May 20, 2010

This study was undertaken to describe the patient demographics, injuries, mechanisms, treatments, outcomes, and resource requirements associated with spine injuries sustained while mountain biking.

Conclusion: Spine fractures and spinal cord injuries caused by mountain biking accidents typically affect young, male, recreational riders. The medical, personal, and societal costs of these injuries are high. Injury prevention should remain a primary goal, and further research is necessary to explore the utility of educational programs, and the effect of helmets and other protective gear on spine injuries sustained while mountain biking.

Mountain Biking Injuries - An Update

Robert L. Kronisch 1 and Ronald P. Pfeiffer 2

1 Student Health Center, San Jose State University, San Jose, California, USA

2 Center for Physical Activity and Sport, Boise State University, Boise, Idaho, USA

Conclusion: Mountain biking is a popular sport that can result in a wide variety of injuries. Overuse injuries have been poorly studied, but appear to be common. Most acute injuries are minor in nature; however, serious skeletal, neurological and visceral trauma can occur when a cyclist is ejected from the bicycle.

Mountain Biking Injuries Requiring Trauma Center Admission: A 10-year Regional Trauma System Experience

Kim, Peter T. W. MD; Jangra, Dalbhir MD; Ritchie, Alec H. MD, CCFP(EM); Lower, Mary Ellen BFPA; Kasic, Sharon CCHRA(C); Brown, D Ross MD, FRCSC, FACS; Baldwin, Greg A. MD,

FRCPC; Simons, Richard K. MB, BChir, FRCSC, FACS

The Journal of Trauma: Injury, Infection, and Critical Care: February 2006 - Volume 60 - Issue 2 - p 312-318

Background: Mountain biking has become an increasingly popular recreational and competitive sport with increasingly recognized risks. The purpose of this study was to review a population based approach to serious injuries requiring trauma center admission related to mountain biking, identify trends . . .

Methods: Three trauma centers in the Greater Vancouver area exclusively serve a major mountain bike park and the North Shore Mountains biking trails. The Trauma Registries and the patient charts were reviewed for mountain bike injuries from 1992 to 2002. . .

Results: A total of 1,037 patients were identified as having bicycling-related injuries. Of these, 399 patients sustained 1,092 injuries while mountain biking. There was a threefold increase in the incidence of mountain biking injuries over a 10-year period. Young males were most commonly affected. Orthopedic injuries were most common (46.5%) followed by head (12.2%), spine (12%), chest (10.3%), facial (10.2%), abdominal (5.4%), genitourinary (2.2%), and neck injuries (1%). High operative rate was observed: 38% of injuries and 66% of patients required surgery. One patient died from his injuries.

Conclusion: Mountain biking is a growing cause of serious injuries. Young males are principally at risk and serious injuries result from intended activity and despite protective equipment . . .

General sports injury hospitalisations:

Australian sports injury hospitalisations 2011-12

Kreisfeld R, Harrison J and Pointer S, Injury Research and Statistics Series Number 92, AIHW Catalogue Number INJCAT 168 Australian Institute of Health and Welfare (2014)

During 2011-12, over 36,000 people aged 15 and over were hospitalised as the result of an injury sustained while playing sport, spending a total of 79,000 days in hospital, though these numbers are likely to represent a significant underestimate of sporting injuries. This figure represented 8% of all injury hospitalisations during that period of time. Around two thirds of those admitted to hospital for a sport related injury were under 35 years of age, and over three quarters were men.

The National Health survey shows that half a million Australians may carry a long-term condition as a result of a sport or exercise related injury.

Australian Institute of Health and Welfare (2015)

The rate of injury hospitalised cases in Australia rose from 1999-00 to 2012-13 by an average of 1% per year. In 2012-13, case numbers and rates were higher for males than females for all age groups, up to 60-64 years.

The National Health Survey also estimates that more than half a million persons may carry a long-term condition as a result of a sport or exercise related injury. This represents 24% of all persons affected by long-term conditions. [source: National Health Survey: Injuries, Australia, 2001, Australian Bureau of Statistics, Catalogue Number 4384.0 (2001)]

Lack of Research into Adventure Sports Injuries:

A Decade of Injury Monitoring in New Zealand Adventure Tourism: A Summary Risk Analysis by Tim A. Bentley & Stephen J. Page, Science Direct, 2007:

"Adventure Tourism safety has received relatively little research attention despite the level of risk inherent in many adventure activities."

"Safety and well-being are significantly underrated issues in tourism research."

[Tourism Promotion] "is based on a consistent portrayal of positive images and stories"

"risk may be weighed against personal fulfilment and social approval."

"It is not good for a national image if you can demonstrate the extent of injuries and morbidity when you have a tourism industry that can easily be damaged by negative information. The consequences being that the scale of the adventure tourism injury problem . . . is not known, while intervention cannot be effectively designed or targeted."

Sports Injuries in Children & Adolescents:

Children and Adolescents Mountain Bike Injuries:

This article provides an overview of what is known about the scope of the injury problem affecting children and adolescent mountain bikers, the risk factors involved and injury prevention strategies. The proportion of injured child and adolescent mountain bikers ranges from 10.6% to 64.0%, but few studies provide separate analysis of youth injuries. Upper extremity injuries appear most common except among adolescents where the risk of head injury and traumatic brain injuries are greater. Concern is raised regarding the reported frequency of spine fractures and spinal cord injuries. Multi-faceted, longitudinal injury research focusing on youth mountain bikers is required to provide a reliable basis for testing risk factors and evaluating preventive measures.

Injury prevention in kids' adventure and extreme sports: future directions Carolyn A. Emery

ABSTRACT: Youth have very high participation and injury rates across sport and recreational activities, including in adventure and extreme sports. Sport and recreation is the leading cause of injury in youth and may lead to lower levels of physical activity, higher adiposity, and long-term consequences such as overweight/obesity, post traumatic osteoarthritis, and post-concussion syndrome which can adversely affect future health. Injuries are predictable and preventable in youth sport, including adventure and extreme sport. *Sports Medicine: Vol 26, No sup1 15/09/2018*

Time to add a new priority target for child injury prevention? The case for an excess burden associated with sport and exercise injury: population-based study:

Finch C, Wong Shee A and Clapperton A, British Medical Journal Open, published online 2 July 2014.

This research sought to determine the population-level burden of sports injuries compared with that for road traffic injuries among children under the age of 15 years in Victoria, Australia.

Using data collected from Victorian hospital emergency department presentations during 2002-2010, it's estimated that the annual impact of sports

injuries is between \$1.65 and \$2 billion in Australia. In addition, there is a personal 'cost' of sport injuries that is hard to measure. Injuries are a significant reason for dropout (i.e. non-participation in sport) each year, and this impacts upon lifelong physical activity habits. The Victorian Taskforce's report estimates that in Victoria alone, approximately 4,500 participants are lost to sport each year as a result of injury in five major sports: Australian Football, Basketball, Cricket, Football (soccer), and Netball. Comprehensive injury prevention strategies may help to reduce this figure.

Sports Injuries in Children and the alarming lack of research despite sports causing more injury to children than road accidents:

"How common are deaths and other injuries? What causes those injuries and what can be done to prevent them? We don't really know. Australia has no national, or even state-based, monitoring of sports injuries."

<https://theconversation.com/better-data-reporting-will-prevent-sports-injuries-and-deaths>

Concerns about future Osteoarthritis due to Sports injuries:

The incidence and burden of hospital-treated sports-related injury in people aged 15+ years in Victoria, Australia, 2004-2010: a future epidemic of osteoarthritis?

C.F. Finch, J.L. Kemp, A.J. Clapperton

Australian Centre for Research into Injury in Sport and its Prevention (ACRISP)

Objectives: Previous sports injury is a known risk factor for subsequent osteoarthritis (OA), but population-based rates of sports injury are unknown. The aims of this study were to:

(1) describe the trends in the population incidence and burden of all hospital-treated sports injury in Victoria, Australia in adults aged 15+ years;

(2) determine the incidence of lower limb and knee injuries; and

(3) quantify their population health burden as average direct hospital costs per injury and lengths of stay

Results Between January 2004 and December 2010 there were 165,496 hospital-treated sports injuries in people aged 15+ years in Victoria. Of these, 59,399 (35.9% of all sports injury cases) were lower limb injuries, 29,430 (17.8%) were injuries to the knee and lower leg and 11,749 (7.1%) were knee dislocations, strains and sprains. The rate of all hospital-treated sport injury, per 100,000 adult participants, increased by statistical significance by 24% over the 7-year period. The rate of ED admissions for sports injuries increased by 28% over the 7-year period, while the rate for hospital admissions only increased by 16% over the same period. The estimated direct hospital costs of hospital-treated sports injury was \$265 million overall, with an average cost per injury of \$1,510. Overall, the estimated total cost of knee and lower leg sports injury was less than a third of the total sports injury costs, but the per-injury average cost was 1.5 times higher. Overall, hospital-treated sports injury accounted for 143,947 hospital bed days; of these 26.5% were associated with lower limb injuries and 12.4% specifically to knee and lower leg injuries.

Concerns about jarring forces on the head causing chronic brain injury:

The magnitude of translational and rotational head accelerations experienced by riders during downhill mountain biking (Causes of Potential Permanent Brain Injury)

Howard T. Hurst Stephen Atkins Ben D. Dickinson
School of Sport and Wellbeing, University of Central Lancashire, UK
School of Health Sciences, University of Salford, UK
21 March 2018

Objectives: To determine the magnitude of translational and rotational head accelerations during downhill mountain biking.

Methods: Sixteen male downhill cyclists . . . were monitored during two rounds of the British Downhill Series. Riders performed two runs on each course wearing a triaxial accelerometer behind the right ear. (Testing) for mean and maximum peak translational (g) and rotational accelerations (rad/s²) and impact duration for each course.

Conclusions: Findings indicate that downhill riders may be at risk of sustaining traumatic brain injuries and course design influences the number and magnitude of accelerations.

US Findings in the Scrotum of Extreme Mountain Bikers

Ferdinand Frauscher, Andrea Klauser, Arnulf Stenzl, Gernot Helweg, Birgit Amort, Dieter zur Nedden, May 1 2001

Abstract

PURPOSE: To sonographically investigate whether mountain bikers have a higher prevalence of scrotal abnormalities compared with that in nonbikers.

MATERIALS AND METHODS: Eighty-five male mountain bikers (mean age, 25 years; age range, 17–45 years) and 31 healthy nonbikers (mean age, 24 years; age range, 15–37 years) were examined for scrotal findings at ultrasonography (US). Only male subjects with a history of extensive off-road biking (≥ 2 h/d 6 d/wk; covered distance, $>5,000$ km/y) were assigned to the group of mountain bikers, whereas the control group did not engage in bicycling. In addition to clinical evaluation, US examination of the scrotum was performed by using a linear-array transducer operating at a frequency of 8.0 MHz.

RESULTS: Eighty (94%) mountain bikers had abnormal findings at scrotal US. Thirty-nine (46%) had a history of intermittent scrotal tenderness or discomfort but no severe scrotal trauma. Abnormal findings at US included scrotal calculi in 69 (81%), epididymal cysts in 39 (46%), epididymal calcifications in 34 (40%), testicular calcifications in 27 (32%), hydroceles in 24 (28%), varicoceles in nine (11%), and testicular microlithiasis in one (1%). In the control group, abnormal findings were noted in five (16%), all of whom had epididymal cysts. The overall difference in the number of scrotal abnormalities in bikers compared with the number in nonbikers was significant ($P < .0001$, χ^2 test).

CONCLUSION: US shows a significantly higher prevalence of extratesticular and testicular disorders in these mountain bikers compared with nonbikers.

Bad News For Male Mountain Bikers

<https://www.cbsnews.com/news/bad-news-for-male-mountain-bikers/>

DECEMBER 2, 2002 / 12:03 PM / AP

Frequent mountain biking may reduce fertility in men, according to a small Austrian study that adds fodder to a debate over cycling and male sexual function.

The research suggests frequent jolts and vibration caused by biking over rough terrain may cause abnormalities, including small scars within the scrotum and impaired sperm production.

The abnormalities were found in professional mountain bikers and other "extreme" bikers who logged at least 3,000 miles yearly - or an average of more than two hours a day, six days a week.

Dr. Ferdinand Frauscher, a urology-radiology specialist at University Hospital in Innsbruck, Austria, said he studied about 55 avid mountain bikers and found nearly 90 percent had low sperm counts and scrotal abnormalities.

Only 26 percent of the 35 non-bikers he studied had similar damage, according to research presented at this week's annual meeting of the Radiological Society of North America.

Whether the abnormalities were severe enough to make fathering a child difficult is uncertain, though some of the bikers studied had already experienced difficulty conceiving, Frauscher said.

Bicycle Riding: Erectile Dysfunction and Urethral Stricture Risks – Columbia University, Department of Urology

While bicycle riding is a good way to exercise, it can increase your risk for developing erectile dysfunction (ED) and urethral stricture (weak urinary stream).

Prolonged riding can even cause numbness and tingling in the penis and scrotum. Bicycle saddles with a long nose also compress the bulbar urethra and after repetitive trauma to this area, can compromise urethral blood flow and increase chances for a stricture (urethral narrowing and slow urinary stream). Straddle injuries (falling on the bicycle bar) can cause a crush injury of the bulbar urethra between the bar and the pubic bone. This typically occurs with BMX or mountain biking. Such strictures are typically short and with severe fibrosis of the surrounding urethral tissue.

What's the risk of avid bike riding and ED?

The relationship between ED and bicycling was first demonstrated in the Massachusetts Male Aging Study (MMAS), a cross-sectional survey of 1709 men in their 40's to 70's. The random sample included a variety of cyclists, such as recreational and occasional riders, stationary bikers, and serious sport cyclists. A key finding of the MMAS was the difference between moderate cycling (< 3 hours per week), or "avid" cycling (> 3 hours per week), and the development of ED. Those who cycled at least 3 hours per week were found to have an odds ratio for developing moderate or complete ED of 1.72. (Odds ratios > 1.5 are considered a health risk) Therefore, men who cycle for more than 3 hours per week are more likely to cause potential artery blockage and long-term damage to their penis. Furthermore, any compromise to penile blood supply will also compromise urethral blood supply.

Ultimately, you should weigh the risks versus benefits of "avid" bicycle riding. If you choose to ride, however, we suggest using a comfortable and wide saddle without a "nose". Bicycle seats without a nose cause the least compromise in blood flow to the penis and urethra. Furthermore, minimize bike riding to less than 3 hours per week, if possible.

The Safety of Mountain Biking vs. Street Biking

Severe street and mountain bicycling injuries in adults: a comparison of the incidence, risk factors and injury patterns over 14 years

Derek J. Roberts, MD, Jean-Francois Ouellet, MD, Francis R. Sutherland, MD, Andrew W. Kirkpatrick, MD, MHSc, Rohan N. Lall, MD and Chad G. Ball, MD, MSc

Conclusion

With the exception of spine injuries, severely injured cyclists display similar patterns of injury and comparable outcomes, regardless of style (street v. mountain). These injuries resulted in trauma to the head (67.4%), extremities (38.4%), chest (34.1%), face (26.0%) and abdomen (10.1%) being common. Spinal injuries, however, were significantly more frequent among mountain cyclists.

Walking

Top 20 sports led by walking, swimming and gym training

May 13 2018 Roy Morgan Research

<http://www.roymorgan.com/findings/7592-australian-sports-participation-rates-among-children-and-adults-december-2017-201805110755#:~:text=In%20fact%20walking%20for%20exercise,regular%20sport%20or%20activity%20undertaken>

Walking for exercise is the most popular sport or activity which Australians participate in. Nearly half of adult Australians, or 47.9%, regularly go for a vigorous stroll. This is an increase of 2.6ppts, or around 800,000 participants, since 2014.

Combining data for the year to December 2017 from the Single Source survey of Australians aged 14+ and the Young Australians survey of kids aged six to 13 shows the next most popular activity is swimming with 14% of Australians six years or older swimming regularly. Over 1.2 million Australians aged six to 13 and more than 1.9 million adults now swim.

Going to the gym/weight training is Australia's third most popular sporting activity with over 3 million Australians regularly participating. Like walking gym/weight training was only asked of adults.

These are the top-line findings from the latest National Sports Participation report from Roy Morgan.

Just under 10% of Australians regularly go cycling and soccer is Australia's most widely played team sport with 7.8% of Australians playing regularly.

Nearly 10 million Australians aged 14 and over, or 47.9%, regularly go walking for exercise making this activity more than three times as popular as gym/weight training (15.4%). Jogging is the third most popular activity for Australians aged 14 and over with 10.1% regularly participating ahead of swimming on 9.7% and cycling on 5.8%.

Sports & Violence

The association between sports participation, alcohol use and aggression and violence: A systematic review

Anders L. S nderlund Kerry O'Brien Peter Kremer Bosco Rowland Florentine De Groot Petra Staiger Lucy Zinkiewicz Peter G. Millera

Abstract

Objectives

To review the current research on alcohol-related violence and sports participation.

Conclusion

"The reviewed research indicates higher rates of alcohol use and violence in athlete populations when compared against non-athlete populations. Masculinity, violent social identity and antisocial norms connected to certain sports stand out as potential factors that may impact the association between sport and violence in athlete populations."

Whether teams win or lose, sporting events lead to spikes in violence against women and children

The Conversation, July 13, 2018 6.03am Updated September 27, 2018 1.05pm

While sports can bring fans together in celebration and camaraderie, researchers have documented a more troubling trend that accompanies these major events – a frightening increase in domestic violence.

In Australia, data released by the New South Wales Bureau of Crime Statistics earlier this year revealed that on State of Origin game nights, there is a staggering 40.7% surge in domestic assaults in NSW.

This spike in violence against women and children has remained consistent during State of Origin matches from 2012-17, the crime statistics show.

Increases in family violence have also been documented during the AFL Grand Final and Melbourne Cup. Internationally, there are spikes in domestic violence associated with the World Cup and even smaller events, like the 10-day Calgary Stampede and the Grey Cup Final in Canada.

And statistics show that increases in violence are roughly the same whether perpetrators' teams win or lose.

Researchers at Lancaster University in the UK studied family violence during the World Cups in 2002, 2006 and 2010, and found a 26% rise in domestic assaults when England won or drew, and a 38% jump when the team lost. Domestic violence incidents were up 11% the day after an England match – win or lose – suggesting a carry-over effect, too.

Another study conducted at the University of East London confirmed these findings.

Fearing a repeat of violent outbreaks during this year's World Cup, the UK's National Centre for Domestic Violence launched a confronting campaign with the tagline "If England gets beaten, so will she".

Sport-related domestic violence : exploring the complex relationship between sporting events and domestic violence

D. Williams, Fergus G. Neville Published 2014 Psychology

The link between sport and violence is widely acknowledged. While the focus has been on "player violence" and "crowd violence" it is recognised that a variety of other incidents of sports-related violence exist, including domestic violence. Empirical and anecdotal evidence point toward increased rates of domestic violence among male athletes. Moreover, there is evidence that domestic violence also increases around sporting events in wider society.