
REVIEW OF ENVIRONMENTAL FACTORS

for

Horse Riding in Wilderness Pilot



Mummel Gulf National Park

March 2014

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BACKGROUND

Increasing visitor opportunities

The NSW Government is committed to providing a diverse range of sustainable visitor and recreational experiences to ensure a broad spectrum of the community can enjoy NSW national parks and reserves. Horse riding in national parks provides an opportunity to experience and appreciate these natural environments. Horse riding also has significant heritage value for many people in the community, and horse riding in national parks supports the maintenance of these cultural traditions and connections. Many national parks are on land where horse riding previously occurred, or continues today.

The *Strategic Directions for Horse Riding in NSW National Parks* is guiding the provision of improved horse riding opportunities across the national parks system. A feature of the strategy is a commitment to undertake a targeted trial of horse riding in wilderness.

Horse riding in wilderness

Approximately 30 per cent of the total area covered by NSW national parks is declared wilderness. There is a history of recreational horse riding in a number of NSW wilderness areas, prior to their declaration as wilderness. Following declaration, the past policy position has been to exclude horse riding from wilderness areas.

In recognition of strong historical usage and contemporary community interest, the NSW Government has committed to trialling horse riding in five wilderness locations through a two year pilot. The pilot program will enable NPWS to determine whether potential impacts on park and wilderness values can be managed within acceptable thresholds. The proposed trial is underpinned by a monitoring framework intended to provide early identification of impacts and apply appropriate management responses to minimise environmental risks.

The pilot program has been developed in accordance with the requirements of the *Wilderness Act 1987* and the *National Parks and Wildlife Act 1974*. In particular, the choice of trial locations, access arrangements, group size limits and the monitoring framework are intended to support the management principles for wilderness areas, including:

- protection of the unmodified state of the area and plant and animal communities;
- preserving capacity of areas to evolve in the absence of significant human interference; and
- providing opportunities for solitude and appropriate self-reliant recreation.

The horse-riding in wilderness pilot program involves five proposed locations:

- Kosciuszko National Park
- Mummel Gulf National Park
- Deua & Monga National Parks (two locations)
- Curracabundi National Park

Horse riding will occur on management tracks and trails (which are already vehicle accessible and used for park management purposes such as bush fire hazard reduction), and existing or historical bridle tracks (not vehicle accessible), on a casual and transitory basis, and will be generally accessible and open to the public for that purpose during the trial period. Consistent with the principle of protecting the unmodified state of wilderness areas, no new tracks or trails will be

constructed and maintenance actions will be limited to those needed to maintain existing trails or to ensure they are distinguishable and safe for use. Similarly, in accord with the principle of self-reliance, no new facilities will be developed to support the trial.

Locations for the pilots were canvassed taking into account environmental attributes and values, safety, other park users, connectivity and community interest.

A monitoring framework will be implemented and results publicly reported throughout the two year period. The framework establishes baseline data on current condition and use of the trial locations, using standard site monitoring techniques including stratified sampling. Results will be tracked to provide early identification of any potential adverse impacts to allow for management intervention. Implementation of the monitoring framework is a key element in supporting protection of the unmodified nature of the wilderness areas and their capacity to evolve without significant human interference.

Environmental assessment

In recognition of the level of community interest and the wilderness values of these areas, NPWS has prepared a precautionary Review of Environmental Factors (REF). Each REF has been undertaken using existing procedures and templates.

An REF has been prepared for all pilot locations, except for Curracabundi National Park. A separate REF will be prepared for that location after public consultation on the plan of management for that park has occurred.

MUMMEL GULF NATIONAL PARK

Table of Contents

1. Brief description of the proposed activity	6
2. Proponents details.....	9
3. Permissibility.....	10
3.1. Legal permissibility	
3.2. Consistency with NPWS Policy	
3.3. Type of approval sought	
4. Consultation.....	15
5. Proposed activity(ies)	16
5.1. Location of activity	
5.2. Description of the proposed activity	
5.3. Objectives of the proposal	
6. Reasons for the activity and consideration of alternatives.....	27
7. Description of the existing environment.....	29
8. Impact assessment.....	35
8.1. Physical and chemical impacts during construction and operation	
8.2. Biological impacts during construction and operation	
8.3. Community impacts during construction and operation	
8.4. Natural resource impacts during construction and operation	
8.5. Aboriginal cultural heritage impacts during construction and operation	
8.6. Other cultural heritage impacts during construction or operation	
8.7. Matters of national environmental significance under EPBC Act	
9. Proposals requiring additional information.....	49
9.1. Lease or licence proposals under s.151, NPW Act	
9.2. Telecommunications facilities	
9.3. Activities within the Sydney Drinking Water Catchment	
10. Threatened species assessment of significance (7 part test)	51
11. Summary of impacts.....	53
12. Conclusions	54
13. Supporting documentation.....	55
14. Fees	55
15. Signature of proponent	56

1. Brief description of the proposed activity

Please provide a brief description of the work to be conducted:

<p>Description of proposed activity(s)*</p>	<p>The proposed activity is the two-year pilot trial for horse riding on existing trails within Mummel Gulf National Park. The trial route is shown at Figure 1 and covers approximately 11.2 km.</p> <p>The pilot trial follows Dicks Hut Fire Trail and River Road, providing a loop connection making one single route. The proposed trial supports and builds on existing horse riding in the area, including:</p> <ul style="list-style-type: none"> - camping at the nearby New Country Swamp and taking day trips along the route of the wilderness pilot - an alternative route for riders on the Bicentennial National Trail (BNT). <p>The proposed trial location was exhibited for public comment from 7 June 2013 to 29 July 2013 as part of the plan of management amendment process.</p> <p>A monitoring framework will be applied to the wilderness pilot to ensure there are no unacceptable impacts on park or wilderness values. This is considered an acceptable and appropriate mechanism to ensure a precautionary approach is taken to implementation of the trial.</p> <p>At the conclusion of the two year pilot, an assessment of the outcomes will be undertaken.</p> <hr/> <p>The overarching goals of the proposed activity are to:</p> <ul style="list-style-type: none"> - improve opportunities for sustainable recreational horse riding in NSW national parks; - provide opportunities in unique wilderness locations that recognise the strong historical usage and ensuring the natural and cultural values of the national park and wilderness are protected; - deliver an enhanced community awareness of existing and improved recreational horse riding opportunities in national parks; - build support in the horse riding community for national parks and collaborate on practical park management actions, including encouraging participation in volunteering.
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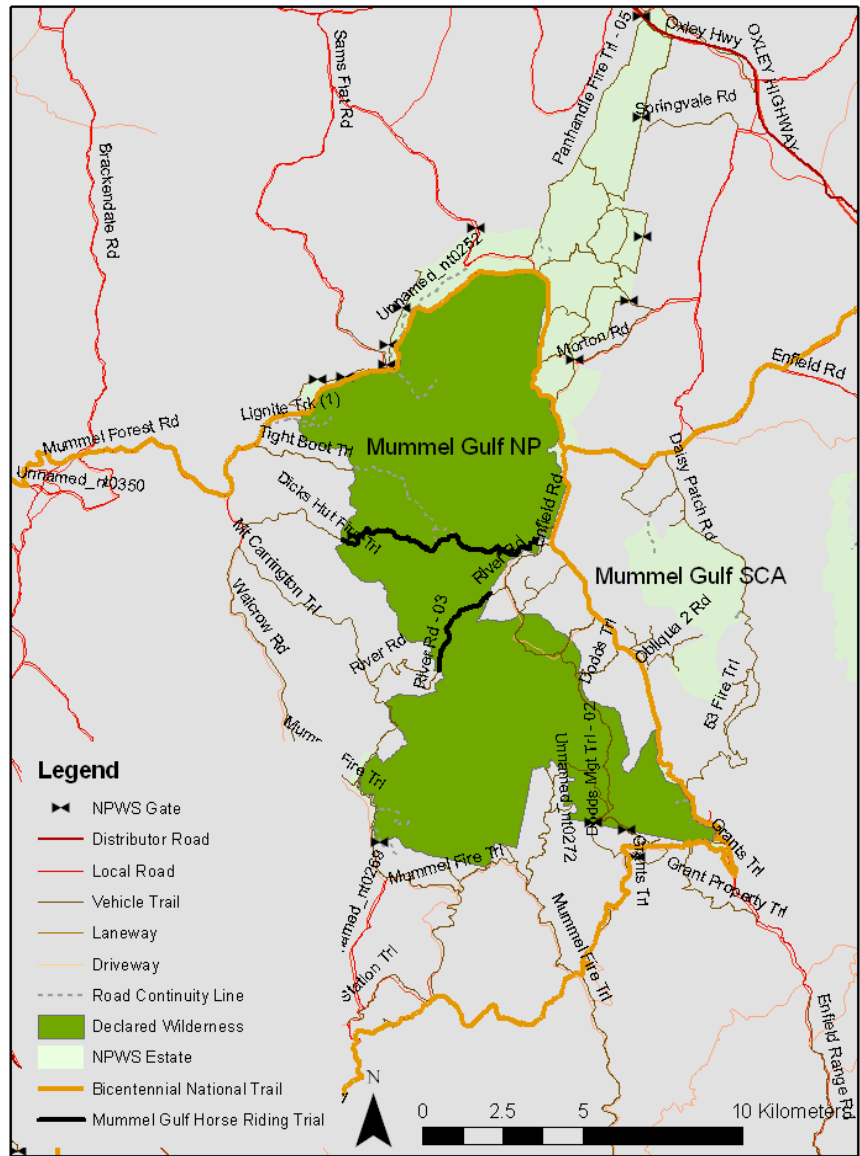


Figure 1: Proposed Wilderness Pilot Route, Mummel Gulf National Park

	<p>In order to minimise environmental impact and enhance the riding experience for the user, the pilot trial will:</p> <ul style="list-style-type: none"> - use existing management trails - endeavour to avoid or minimise impacts on other users of the park, with horse-riding groups sizes limited to a maximum of 20 to support opportunities for solitude, inspiration and appropriate self-reliant recreation - apply a monitoring framework, including thresholds and management responses - be subject to normal operating park management requirements, including management of trail access due to environmental impact, wet weather, fire, etc. - involve NPWS working with horse riding groups to build awareness about good riding techniques, including following the Code of Practice for Horse Riding, and to assist in ongoing maintenance and surveillance of track condition. <p>Horse riding will occur on a casual and transitory basis, and will be generally accessible and open to the public for that purpose during the trial period. Other existing and legally permissible uses of the pilot location, such as bushwalking, will be able to continue.</p>
Estimated commencement date?	April 2014
Estimated completion date?	April 2016

****Note a comprehensive description of the proposal is contained at section 5.2 of this form.***





2. Proponents details

Name	Ms Melinda Murray
Organisation	Office of Environment and Heritage
ACN /ABN (if applicable)	ACN: ABN: 30 841 387 271
Section/Division (OEH proponents only)	NSW National Parks & Wildlife Service
Position	Director, Park Services and Strategy
Address	PO Box 1967
	Suburb: Hurstville
	State: NSW Postcode: 2220
Phone numbers	Business: Mobile:
Fax	
Email	Contact information not required – internal OEH proponent

3. Permissibility

3.1 Legal permissibility

Indicate whether the activity is permissible under the legislation. Section 1.10 and Appendix 1 of the *Proponents Guidelines for the Review of Environmental Factors* provides guidance on permissibility. Include explanation where necessary.


	<i>National Parks and Wildlife Act 1974</i> (NPW Act) The location of the proposed activity is on land reserved under the NPW Act.
Justification: consider the following matters	
	Objects of the Act (s.2A)
<p>The activity has been designed to be consistent with the objects of the Act regarding the conservation of natural and cultural heritage, demonstrated by careful site selection, group size limits and application of a monitoring framework to provide early detection and response to any environmental risks. It also supports the public use and enjoyment objects of the NPW Act by providing additional opportunities for horse riding to occur in a sustainable manner, thereby facilitating public appreciation of park and wilderness values and community heritage.</p> <p>The activity has also been developed to support application of key ESD principles, as follows:</p> <ul style="list-style-type: none"> • precautionary principle – after carefully considering and weighing potential environmental risks, it is considered that the activity is capable of proceeding subject to application of a focused monitoring framework to target and detect key changes in the environment and support management interventions to address these • inter-generational equity – the activity as proposed will support protection of environmental quality for future generations, as well as providing current and future generations with new sustainable opportunities to experience and enjoy natural and cultural heritage • conservation of biodiversity and ecological integrity – the location of the trial along existing management trails is a key element in avoiding risks to biodiversity values, together with group size limits and the monitoring framework • improved valuation, pricing and incentives – the activity, via the monitoring framework, provides a mechanism to limit cost impacts associated with environmental risks (such as track damage and rehabilitation) by allowing early detection and intervention. Opportunities also exist to work with horse riders and other track users to undertake collaborative repair and maintenance works. <p>The activity gives effect to the public interest in protecting the values of this area and its appropriate management by:</p> <ul style="list-style-type: none"> • site selection of the trial locations • group size limits • the monitoring framework. 	
	Reserve management principles (s.30E-30K)
<p>The proposed activity is consistent with and supports the management principles for national parks. In particular it:</p> <ul style="list-style-type: none"> • has been designed to minimise risks to biodiversity and cultural heritage • promotes public appreciation and understanding of the park’s natural and cultural values • provides for sustainable visitor use and enjoyment that is compatible with the conservation of the park’s natural and cultural values • provides for appropriate monitoring. 	
	Title and relevant sections of plan of management or Statement of Interim Management Intent (or drafts):

Mummel Gulf National Park & State Conservation Area Plan of Management 2012 (as amended)


The plan of management provides a range of horse riding recreation opportunities. Horse riding is permitted on road corridors and management tracks, including Panhandle Fire Trail and those parts of the Porters Camp Road, Mummel Fire Trail and Daisy Patch Road. The Bicentennial National Trail (BNT) passes just to the east of the national park along Enfield Road and then along Grants Trail through a small section of the southern part of the park. An alternate route of the BNT (Nundle Detour) goes from New Country Swamp west along Mummel Forest Road.

An amendment to the plan of management was adopted by the Minister for the Environment on 10 February 2014. The amendment enables the two year wilderness pilot to proceed.

The amendment occurred following public consultation in mid-2013, and statutory consultation with the Regional Advisory Committee and National Parks and Wildlife Advisory Council.

 Leasing, licencing and easement provisions of Part 12

- Part 12 of the *NP&W Act 1974* is not relevant to this activity.


 Management powers and responsibilities of NPWS (s.8 and s.12) – for internal NPWS projects

The activity is permissible under s.8 (3)(b) *arrange for the carrying out of such works as the Director-General considers necessary for or in connection with the management and maintenance thereof*, and s.12 (f) *the provision of facilities and opportunities for sustainable visitor or tourist use and enjoyment on land reserved under this Act*.

Special note: for lease proposals under s.151 NPW Act involving new buildings or structures

Section 151A(5) of the NPW Act states that the Minister must not grant a lease under s.151 for visitor or tourist uses that authorises the erection of a new building or structure unless the plan of management identifies the purpose as permissible and the general location for the new building. If relevant to the proposal indicate whether this requirement has been met, or will be.

N/A – no new buildings or structures proposed.

 *Wilderness Act 1987 (for activities in wilderness areas consider objects of the Act, management principles, s.153, etc)*


Justification:

The *Wilderness Act 1987* states that a wilderness area shall be managed so as to:

- (a) restore (if applicable) and to protect the unmodified state of the area and its plant and animal communities
- (b) preserve the capacity of the area to evolve in the absence of significant human interference
- (c) permit opportunities for solitude and appropriate self-reliant recreation (whether of a commercial nature or not).

The proposed wilderness trial in Mummel Gulf National Park has been developed to be consistent with these management principles. In particular:

- **the choice of trial locations along existing management trails** – to protect the unmodified state of the area and biodiversity, and capacity to evolve
- **no new trails or supporting facilities** – enabling appropriate self-reliant recreation of a non-mechanical or motorised nature, and recognising the unique inter-dependent nature of, and skills involved in, the rider-horse relationship and its cultural significance to many in the community
- **application of group size limits** – to protect the unmodified state of the area and biodiversity, capacity to evolve, and support the sense of solitude
- **application of a monitoring framework including thresholds and management responses** – providing a precautionary system for assessing environmental change and taking action, in order to protect the unmodified condition of wilderness and preserve evolutionary capacity.

 *Environmental Planning and Assessment Act 1979 (EP&A Act) (consider aims and objectives of relevant environmental planning instruments, zoning and permissible uses, development controls, etc.)*

Explanatory note: Clause 65 of State Environmental Policy (Infrastructure) 2007 provides that development for any purpose may be undertaken within specified OEH lands without consent. This removes the need for development consent under Part 4 of the EP&A Act, meaning that most activities within NPWS land are assessed under Part 5. However, proponents should still confirm that the SEPP is applicable to their particular proposal, and provide consideration of other environmental planning instruments that would otherwise apply to the proposal if it were not occurring on NPWS land.

Justification: Part 5 of the *EP&A Act 1979*, requires the NPWS to assess the likely environmental impacts of activities proposed to be undertaken on NPWS land. An ‘activity’ includes:


- (a) *the use of land, and*
- (b) *the subdivision of land, and*
- (c) *the erection of a building, and*
- (d) *the carrying out of a work, and*
- (e) *the demolition of a building or work, and*
- (f) *any other act, matter or thing referred to in section 26 that is prescribed by the regulations for the purposes of this definition.*

As currently proposed, the horse riding pilot trial is not considered to meet the definition of an ‘activity’. Nevertheless, given the level of public interest and the wilderness location this precautionary REF has been prepared as if the proposal were an activity.

 *Heritage Act 1977 (for activities likely to affect items or places of historic cultural heritage value)*

Justification:

A search of the NPWS Historic Places Register HHIMS was undertaken and the results are discussed below. There are no aspects of the activity that trigger assessment or approval under the Heritage Act 1977.


 *Threatened Species Conservation Act 1995 (TSC Act) (is the activity consistent with the biodiversity conservation objectives of the Act?)*

Justification:


A search of the OEH Wildlife Atlas was completed and discussion of threatened species matters occurs below. The activity as proposed is considered to be consistent with the objects of the TSC Act.

The proposed activity is not considered likely to affect threatened species either directly or indirectly. The monitoring framework will assist in reducing the risks of potential impact.


The activity is not a threatening process under the TSC Act and no critical habitat is present.

 *Rural Fires Act 1997 (is the activity consistent with the objectives of protecting life and property and protection of the environment?, is it consistent with bush fire management plans?)*

Justification: The *Rural Fires Act 1997* is not relevant to this activity.

 *Fisheries Management Act 1994 (will the activity affect fish or marine vegetation, including threatened species? Is approval required under the Act?)*

Justification: The activity does not require approval under the Fisheries Management Act. Group size limits, the use of existing trails and the monitoring framework will support protection of fish habitat.

 *Commonwealth legislation (including the *Environment Protection and Biodiversity Conservation Act 1999* (EP&BC Act) and the *Telecommunications Act 1997*)*

Mummel Gulf National Park contains threatened species listed under the EPBC Act. These are discussed below.

The proposed activity will not have a significant impact on national heritage values, threatened species or other matters of national environmental significance under the EPBC Act 1999.

3.2 Consistency with NPWS policy

Indicate whether the activity is consistent with NPWS policy, including an explanation where necessary:

<p>Provide details of relevant Government and NPWS policy</p>	<p>The activity is strategically consistent with the <i>NSW 2021</i> commitment to encourage a diverse range of recreational activities in the reserve system and will assist in implementing:</p> <ul style="list-style-type: none"> • Goal 22 – working with the community to protect our local environment and provide more opportunities to enjoy parks, waterways and natural bushland • Goal 27 - encourage increased participation in sporting activities to support healthy lifestyles.
	<p>The activity is consistent with the <i>OEH Corporate Plan 2014 – 2017</i> and is aligned with the organisation’s strategic vision and goals as follows:</p> <ul style="list-style-type: none"> • Vision – <i>Our environment and heritage is valued, protected, enjoyed and supports a prosperous and healthy NSW</i> • Goal – <i>Ensure vibrant natural assets for the health and prosperity of NSW</i> • Purpose – <i>To enrich life in NSW by helping the community to conserve and enjoy our environment and heritage</i> • Role – <i>Encourage communities to experience and enjoy national parks and value their local environment.</i>
	<p>The activity is an identified priority in the NPWS Delivery Plan 13/14. The Delivery Plan incorporates annual agency priorities and ensures project delivery efforts are focused and aligned to agreed outcomes and programs.</p>
	<p>This activity is consistent with the <i>Strategic Directions for horse riding in NSW National Parks</i> adopted in 2012. The strategy commits to establishing five wilderness pilots across NSW, to trial horse riding in wilderness locations for a two year period.</p>
	<p>The activity is consistent with the <i>NPWS Horse Riding Policy Directive (2012)</i>. That policy specifically notes the intention to trial horse riding in up to five wilderness locations within parks, using existing trails, without provision of new facilities (excepting signage and park user information), subject to a monitoring program and the park plan of management.</p>
	<p>The activity is also consistent with the principles of the <i>NPWS Code of Practice for horse riding in parks (2010)</i>. The aim of the code is to provide practical details to help guide horse riders and NPWS staff to sustain the use of horses in parks by maximising safety and enjoyment while minimising any potential impacts on the park’s natural and cultural values.</p>
	<p>The proposed activity is consistent with the published <i>NPWS Horse Riding Regional Work Plans</i>. These were developed by NPWS for eight priority regions working in consultation with local horse riders to identify and prioritise new opportunities for horse riding in each region.</p> <p>The Northern Tablelands Region Work Plan includes actions to implement the horse riding in wilderness trial in Mummel Gulf National Park.</p>
	<p>The proposed activity provides further horse-riding opportunities and builds upon experiences associated with the Bicentennial National Trail (BNT), a multi-purpose trail 5,330 km in length available to horse riders that extends down the east coast of mainland Australia from Cooktown in far north Queensland to Healesville in Victoria. The BNT passes just to the east of Mummel Gulf National Park, along Enfield Road and then along Grants Trail through a small section of the southern part of the park. An alternate route of the BNT (Nundle Detour) goes from New Country Swamp west along Mummel Forest Road. The BNT is available for trekkers using various forms of non-motorised transport including walkers, horse riders and cyclists. Management and use of the BNT occurs under a Memorandum of Understanding (MoU) between the BNT Board and NPWS.</p>

3.3 Type of approval sought

OEH proponents



Internal NPWS approval* or authorisation, including expenditure

***Note:**

- NPWS does not grant park approvals (e.g. leases, licences, consents, etc.) to itself.
- NPWS has a range of general powers to undertake activities on-park, for example sections 8 and 12 of the NPW Act.

4. Consultation

Specify the details of consultation, including who was consulted, how, when and the results of the consultation. Section 2.6 of *Proponents Guidelines for the Review of Environmental Factors* provides guidance on consultation.

<p>Provide details of consultation*:</p>	<p>Statewide consultation: Consultation on horse riding matters has been an ongoing process over many years leading to adoption of the 2006 <i>Recreational Horse Riding Policy</i>. The policy had been subject to review since 2002, including considerable internal and external consultation. The policy sought to provide a balanced approach to the various issues raised during the review process. A Horse Riding Consultative Group has met since mid-2011, comprising key horse riding stakeholders and National Parks and Wildlife Service (NPWS) staff. The non-statutory group was established to provide a forum to discuss opportunities and issues relating to horse riding in national parks and associated policies and procedures, including the implementation of a 2006 MoU established with the Liberal National Coalition. In April 2012, the Minister for the Environment released the <i>Draft strategic directions for horse riding in NSW national parks and reserves</i> to outline the NSW Government's commitment to improved horse riding opportunities. The draft strategy was publicly exhibited from 20 April to 30 June 2012 and over 200 submissions received. After considering public submissions the final strategy was released in late 2012.</p>
	<p>Regional work plans consultation: In early 2013, NPWS consulted with local stakeholders to identify horse riding opportunities and prepare work plans for eight priority regions. The final work plans were publicly released in April 2013. That includes a Northern Tablelands Region Horse Riding Work Plan, which includes priority actions related to implementation of the horse riding in wilderness pilot in Mummel Gulf National Park.</p> <p>Consultation with Regional Advisory Committee NPWS has consulted with the Regional Advisory Committee, which represents a diversity of local community views, on significant horse riding proposals.</p> <p>Public Exhibition of plan of management proposed amendment The proposed amendment to the plan of management for Mummel Gulf National Park was exhibited between 7 June 2013 and 29 July 2013. Eighteen submissions were received and assessed. A copy of the submissions report is provided as Attachment 2. In accordance with statutory requirements the draft amendment and submissions were considered by both the RAC and National Parks and Wildlife Advisory Council. The recommendations of both groups were provided to the Minister for the Environment for consideration. The Minister for the Environment, after considering the draft amendments, submissions, and views of the RAC and Council, adopted the final amendments to the plan of management in February 2014.</p> <p>OEH Website Consultation and feedback on horse riding matters has been facilitated through the OEH website which provides key information on horse riding, policy updates and contact details. http://www.environment.nsw.gov.au/policies/HorseRideStrat.htm</p>

***Notes:**

- Proponents should provide evidence that the relevant NPWS (Parks & Wildlife) office supports the proposal in-principle.
- There are specific consultation and referral requirements for certain proposals requiring a lease or licence under s.151A of the NPW Act. Refer to the *Leases and Licences Referral Policy and Procedures* for more information.

5. Proposed activity(ies)

5.1 Location of activity

Description of premises location	The wilderness pilot trial lies within the central part of Mummel Gulf National Park, following Dicks Hut Fire Trail and River Road. The route is shown at Figure 1 and covers approximately 11.2 km.
	Mummel Gulf National Park is located approximately 40 kilometres south-east of Walcha and 85 kilometres west of Wauchope.
Site reference	South-eastern corner of the Australian mainland at coordinates 31°18'45"S and 151°50'40"E. Easting: 389000 (centre of trail) Northing: 6530000 (centre of trail)
	AMG zone: (54, 55, 56 or 57) Zone 56 Reference system: (eg. GDA94, WGS84, AGD) GDA94
Local Government Area	Walcha
NSW State electorate	Tamworth
Catchment	Manning Catchment
National Park	Mummel Gulf National Park

5.2 Description of the proposed activity

Include a full and comprehensive description of the activity. All aspects of the proposed activity should be described. See Section 3.2 of *Proponents Guidelines for the Review of Environmental Factors* for further guidance.

Description of the proposed activity – include pre-construction, construction, operation and remediation:

<p>The activity involves the provision of an appropriate, safe and sustainable horse riding experience in declared wilderness, on established trails, subject to a monitoring framework for a two year trial period between 2014-2016.</p> <p>No new construction or trail work, or new supporting facilities, are proposed. Any physical works will be limited to routine trail maintenance undertaken for normal operating requirements, to ensure the trail is safe and accessible (e.g. removal of fallen debris). No horse based camping is proposed in the wilderness area as local alternatives outside of wilderness are available.</p> <p>Baseline monitoring sites have been established at key locations along the trial route and baseline data has been collected. The methods for choosing and establishing each baseline sites are detailed in Attachment 6. The baseline sites (quadrats) are marked by temporary pegs or stakes, which were installed by hand and have no impact on park or wilderness values.</p> <p>As discussed below and in Attachment 6, remote sensing cameras are also being temporarily installed in discrete targeted locations as a key mechanism to enable counting of horse usage. The cameras are attached using non-intrusive, non-damaging techniques (such as cable ties). Small-scale signage will similarly be installed to inform the community about the purpose of the cameras, consistent with privacy requirements.</p> <p>Horse riding access is subject to:</p> <ul style="list-style-type: none"> • a maximum size limit of 20 horses per riding group. This is consistent with group size limits on other recreational users in the region, taking account of the particular environmental values present and capacity of the environment; • standard park management operational requirements including any need to restrict access due to fire, weather, or track conditions; • application of the monitoring framework and any management actions or interventions implemented in response to the monitoring thresholds being reached. That may include small-scale works needed to repair or rehabilitate sites. The need for further environmental assessment of any repair or rehabilitation works will be considered on a case-by-case basis. <p>Subject to the above, during the two year trial period access will be available on the identified trails on a casual and transitory basis. No pre-bookings are required. Given the remote location it is expected that horse riding numbers will be low across the two year trial period, but this will be assessed as part of the monitoring program.</p> <p>Standard compliance and enforcement measures will be applied by NPWS to regulate the undertaking of the activity.</p>
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The following images provide a snapshot of the trial location and were collected during baseline monitoring visits.



River Road trail



River Road trail – some evidence of unauthorised trail bike use



River Road trail



River Road trail



On pilot trail before gate



Wilderness gate eastern end of Dicks Hut



Wilderness gate eastern end of Dicks Hut



Dicks Hut Trail



Dicks Hut Trail



Dicks Hut Trail



Bottom of Dicks Hut Trail – Potential fan-out point River Crossing



Bottom of Dicks Hut Trail – Potential fan-out point River Crossing



Pot

Bottom of Dicks Hut Trail – Potential fan-out point and river crossing



Bottom of Dicks Hut Trail



Bottom of Dicks Hut Trail



River crossing



**Dicks Hut Trail
change in vegetation**



**River Road – NE end of River Rd.
Edge of wilderness area**



**River Road – NE end of River Rd.
Edge of wilderness area**

Construction:

No new construction of new trails or related, supporting infrastructure will be undertaken as part of the pilot. As noted above, any physical works will be limited to routine trail maintenance undertaken for normal operating requirements, to ensure the trail is safe and accessible (e.g. removal of fallen debris). Small-scale rehabilitation or repair works may be undertaken if identified as required via application of the monitoring framework.

The size of the proposed activity footprint:

The total pilot trail length is approximately 11.2km utilising existing management trails as below:

- Dicks Hut Trail - around 7.6km
- River Road – around 3.6km

Ancillary activities, such as advertising or other signage (including any temporary signs, banners or structures promoting an event or sponsorship arrangements), roads, infrastructure, bush fire hazard reduction:

Trail closures may be implemented due to various factors such as wet weather, high fire danger and track damage (including management responses identified in the monitoring framework). Park access information is provided to the community via notices and the OEH website. Signage required to support the trial within the wilderness area may include: use of remote cameras; and discrete, small-scale track markers (if needed).

Proposed construction methods, materials and equipment:

No construction of new trails or related infrastructure will be undertaken as part of the pilot. Any routine maintenance undertaken will follow standard procedures for operating in wilderness areas.

The baseline monitoring locations are identified using basic marker pegs or stakes.

Receival, storage, and on site management for materials used in construction:

No construction of new trails or related infrastructure will be undertaken as part of the pilot. Access for monitoring purposes is via 4WD vehicle and all recording materials are removed from the park at the conclusion of the monitoring visit.

Earthworks or site clearing including extent of vegetation to be removed:

No earthworks or site clearing will be undertaken as part of the pilot.

Environmental safeguards and mitigation measures:

The activity is supported by a range of environmental safeguards to ensure protection of the park's values, the unmodified nature of the wilderness area, the ability of the area to evolve without significant human interference, and opportunities for the community to access and enjoy the area's solitude, peace in self-reliant ways.

Choice of trial location

The Dicks Hut Trail and River Road are formed management trails, already used for essential park management purposes such as bush fire hazard reduction. They are also accessed by bushwalkers and other visitors from time to time. Use of these areas avoids the need to open or provide new access for horse riders, ensuring that only existing modified areas are used.

Group size limits

As noted above, a limit of 20 horses applies to any group. This is established in the plan of management amendment and is consistent with other limits applied to recreational activities in the broader region, including in nearby Oxley Wild Rivers National Park which the Bicentennial National Trail also traverses.

Camping

No horse based camping is proposed in the wilderness area.

Monitoring framework

The draft monitoring framework is at Attachment 5, and the baseline monitoring methods are at Attachment 6. The monitoring approach has been developed taking account of existing research literature and best practice techniques, internal and external peer review and consultation, and refinement following field visits and baseline survey to ensure it is pragmatic and workable.

The monitoring framework seeks to establish whether horse riding on wilderness trails can occur in a sustainable way and within appropriate limits of acceptable change. Specifically, it aims to:

- a) detect impacts that may occur to key values as a result of horse riding, on the pilot wilderness trails, within the two year trial period
- b) define thresholds for implementing management interventions to protect key values from irreversible damage
- c) detect whether interventions are successful in ensuring key values are protected from irreversible damage and inform when interventions should cease.

The monitoring framework focuses on key variables including track and soil condition, weeds and visitor experiences.

For the trial in Mummel Gulf National Park, fifteen monitoring sites have been established and baseline data collected. This provides the key information to determine the condition of the area before the trial commences, and future monitoring visits will report change against this data.

The monitoring thresholds (i.e. what level of change will prompt management intervention) and the related management responses (i.e. what actions will be implemented) are being developed and refined in a two-stage process allowing for further expert and community input:

1. internal and external expert consultation will develop initial thresholds and management interventions
2. local community consultation will refine and recalibrate the initial thresholds and interventions to ensure they take account of specific local circumstances and environmental conditions.

The thresholds and management responses will be finalised and in place in advance of the first monitoring visit occurring, which is scheduled within six months of the trial commencing.

Throughout the trial period, data from monitoring will be used to indicate whether impacts are occurring and triggers are being reached. It is also used to assess if any required management interventions are keeping impacts to within acceptable limits. Outcomes from the monitoring work will be regularly updated and released on the OEH website. At the conclusion of the two-year period, overall analysis of the monitoring outcomes will be a key part of the trial's evaluation.

Mitigation measures / potential intervention:

As noted above, the final monitoring thresholds and management responses are being developed through a consultative process and will be in place prior to the first monitoring visits occurring. As an example only, the following are an illustration of the types of management responses that could be applied if thresholds of change are met:

- work with horse riding groups to improve education, awareness and compliance with the Horse Riding Code of Practice;
- implement remediation activities while horse riding continues (e.g. regeneration, fencing, weed control, silt fencing, track maintenance), including joint projects with user groups;
- temporary track (or section) closure combined with remediation activities;
- permanent track closure if impacts cannot be mitigated in a reasonable timeframe.

Sustainability measures – including choice of materials (such as recycled content) and water and energy efficiency

No materials required

Construction timetable and staging, hours of operation:

N/A – no construction is proposed.

Note: If the activity involves building or infrastructure works, it may require certification to Building Code of Australia or Australian Standards prior to commencement. Further information on the types of projects requiring certification, and how to obtain certification, is contained the NPWS *Construction Assessment Procedure* at: <http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm>

5.3 Objectives of the proposal

Clearly state the objectives of the proposal. See section 3.2 of *Proponents Guidelines for the Review of Environmental Factors* for further guidance.

Provide details of objectives of the proposal	The key aim of the wilderness pilot is to meet the NSW Government's commitment to provide sustainable horse riding recreational experiences to ensure a broad spectrum of the community can enjoy and appreciate national parks and reserves.
	The overarching goals of the proposed activity are to: <ul style="list-style-type: none">- improve opportunities for sustainable recreational horse riding in NSW national parks;- provide opportunities in unique wilderness locations that recognise the strong historical usage and ensuring the natural and cultural values of the national park and wilderness are protected;- deliver an enhanced community awareness of existing and improved recreational horse riding opportunities in national parks;- build support in the horse riding community for national parks and collaborate on practical park management actions, including encouraging participation in volunteering.
	The wilderness pilot in the central part of Mummel Gulf National Park will build on existing horse riding opportunities in the area, expanding the scope of options available.

6. Reasons for the activity and consideration of alternatives

Section 3.2.1 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance.

Reasons for activity:

In 2012 the NSW Government released the *Strategic Directions for Horse Riding in NSW National Parks*. The strategy committed to trialling horse riding in selected wilderness areas in NSW national parks, through establishment of five wilderness pilots. The initiatives proposed in the strategy are consistent with the NSW Government's commitments in *NSW 2021* to work with the community to protect our local environment and to provide more opportunities to enjoy parks and natural bushland. The NSW Government is committed to increasing the level of access to allow horse riders the opportunity to experience a wider range of national parks

Horse riding is a popular recreational activity that has strong cultural associations for many Australians. Many national parks are on land where horse riding occurred for over a century and a half. Horse riding is already permitted in non-wilderness areas in Mummel Gulf National Park and there is community interest in additional access.

In addressing interest in further horse riding opportunities in national parks, the implementation of the wilderness pilots will enable NPWS to determine whether the environmental and social impacts can be managed within acceptable thresholds.

Alternatives:

The choice of the pilot location in Mummel Gulf National Park has considered a range of factors including environmental attributes and values, historical and contemporary demand, safety, connectivity and the views of local stakeholders. Route options were canvassed with representatives from local horse riding groups during development of the Northern Tablelands Regional Work Plan, taking account of existing road and trail networks, vehicle and horse float access, track conditions, topography, horse watering points, liaisons with Forests NSW and links with the Bicentennial National Trail (BNT).

The selected trails provide a number of options for horse riders either independently or in association with use of the (BNT), as follows:

- **Dicks Hut Trail** offers a relatively short but steep return trip from either side down to the Mummel River. This trail also allows for an alternate route for the BNT by linking parts of the BNT with the main route as an alternative to Mummel Forest Rd. Users can also complete a loop from any point utilising Enfield Rd, Dicks Hut Trail and Mummel Forest Rd. This also offers the option of camping at New Country Swamp (outside of wilderness) and completing a circuit ride.
- **River Road** offers similar options to users with the addition of a loop around Dicks Hut Trail and River Rd. Where riders choose to use the loop options they will be also travelling within Forestry Corporation of NSW estate and will need to comply with Forestry Corporation regulations applying to use of the forest and camping. At times some sections of State Forest may be closed for forest management activities.

An alternative involving Dodd's Trail, which runs off Enfield Rd, was also considered. However it was rejected because it runs parallel to the BNT before re-joining it and traversing private property.

The proposed route was publicly consulted during public exhibition of the draft plan of management amendments in mid-2013. Eighteen submissions were received and considered.

Do nothing:

Under the 'do-nothing' option horse riding would continue to be restricted to the current locations within the national park. While this option would remove any potential impacts associated with the activity, it is not consistent with the Government's commitments to expand opportunities for horse-riding, including via a trial in wilderness areas. It would also diminish the ability to provide well-managed and monitored access to this area, limiting the scope for some community members to experience and appreciate it (e.g. if they are unable to walk-in) or to support and celebrate cultural and historical connections.

Justification for preferred option:

Following consideration of submissions and recommendations of the RAC and Advisory Council, the Minister for the Environment adopted a plan of management amendment providing for the preferred option proposed in this REF.

Key issues considered in that decision-making process included:

- the various and strong views on the proposal
- potential environmental impacts; and
- pragmatic requirements for a two-year trial and monitoring program.

The preferred option proposed in this REF will provide for appropriate sustainable horse riding access to fulfil the NSW Government’s commitments to trialling horse riding in wilderness locations. It will increase community accessibility and opportunities to enjoy and appreciate the park’s values. In addition, it will be undertaken in a manner, and with safeguards in place, to ensure consistency with the management principles for wilderness. Namely: protection of the unmodified state of the area and plant and animal communities; preserving evolutionary capacity; and enabling opportunities for solitude and appropriate self-reliant recreation.

Special note: for visitor use, tourism and other proposals requiring a lease or licence under s.151 NPW Act

Proposals seeking a lease or licence under s.151 NPW Act must address the site suitability requirements of the sustainability assessment criteria adopted by the Director General of NPWS (**see below**). For further information on completing the assessment of site suitability, refer to the criteria and supporting guidelines at: <http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm>

Site suitability (lease or licence proposals under s.151 NPW Act)	
Site character	N/A – the activity is not subject to the provisions of s.151
Landscape context	N/A
Application of site suitability matrix	N/A
Strategic site assessment (if required by the matrix)	N/A
<i>Attach any separate assessment report</i>	

7. Description of the existing environment

Include a comprehensive description of the existing environment and surrounds that will be, or are likely to be, affected by the proposed activity. Sensitive areas of the environment should be identified in this section.

Section 3.4 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance.

Description of the existing environment:

Mummel Gulf National Park covers an area of 14,127 hectares. An original area of approximately 12,260 hectares was gazetted in January 1999 as part of the North East Regional Forest Agreement under the *Forest and National Park Estate Act 1999*, and an additional area of 1,788 hectares, known as the Dicks Hut Lease, was purchased in 2003 and gazetted as part of Mummel Gulf National Park in 2007. Mummel Gulf National Park contains extensive areas of old growth forest and is large enough to support space dependant top order predators such as the spotted tailed quoll and a number of species of owl. The park also supports key populations of the Parma wallaby and common wombat. It contains two plant and seventeen animal species listed under the Threatened Species Conservation Act. A significant area, approximately 10,700 hectares or 76% of the park, has been declared wilderness. The proposed wilderness pilot route is located in declared wilderness within the national park. The main access points to the proposed wilderness pilot route are via Dicks Hut Fire Trail and River Road.

Meteorological data:

The area receives a moderate annual rainfall of 900 to 1200 millimetres. The wettest period is between January and March. Mean daily temperatures range from 24-28 degrees Celsius in the summer, to 10-14 degrees Celsius in winter. Frosts occur frequently between April and November. Snow occurs on higher areas during winter.

Topography:

Mummel Gulf National Park is a wild and rugged landscape of steep gorges and valleys, cliffs and ridges on the south-eastern edge of the escarpment of the New England Tableland, which falls away steeply into the Upper Manning and Macleay valleys. The park encompasses a dramatic altitudinal gradient from tableland rim to valley floor, centred on the wild and rugged Mummel River, a significant tributary to the Manning River. High points along the north west boundary of the park form a feature known as the Panhandle and include Porters Camp (1449 metres above sea level) and Dennes Sugarloaf (1360 metres above sea level) which dominate the landscape. The area ranges in altitude from 450 metres above sea level where the Mummel River leaves the southern boundary of the national park, to 1449 metres at Porters Camp. The Mummel River, which has formed a deep V-shaped gorge, or gulf, between high ridges, runs through the middle of the national park.

Surrounding land uses:

Major land uses in the surrounding area include timber harvesting and cattle grazing. Tourism is growing in the region and the national park and the surrounding State Forests are popular for scenic driving. The reserves are two of many in the area (includes Mummel Gulf State Conservation Area), with Cottan-Bimbang National Park, Werrikimbe National Park, and Nowendoc National Park located in close proximity and collectively they form part of a regional system of conservation reserves. The nearest rural town is Walcha located at the south-eastern edge of the Northern Tablelands and approximately 50km north west of Mummel Gulf National Park.

Geology/Geomorphology:

The geology of the area relates to Gondwana times showing evidence of drifting and rifting with shallow marine beds, felsic volcanic and low grade metamorphism. The area forms part of the New England Fold Belt and is characterised by highly metamorphosed Palaeozoic sedimentary rocks, intruded by granites of the Devonian age, as well as particulate covered Tertiary basalt flows. Rocks of the Devonian Sandon Association, sandstone, slates, schist, chert and jasper underlie the southern section of the park. The rest of the planning area is underlain by lithology of the Carboniferous Coffs Harbour Beds, sandstone, shales and schists. More recently, lava flowed over much of the landscape and covered some of the central part of the planning area. Volcanic rocks include Tertiary basalt, dolerite and bole.

Soil types and properties:

Red brown structured loams on basalt. A range of other soil types relating to geology but poorly known. On the basalts the soils are typically red, friable loams or clay loams with high fertility, good structure and excellent water-holding capacity. On granites and most of the quartz rich sedimentary rocks, shallow yellow earths are found on hillcrests, yellow and brown texture contrast profiles are found on the slopes

Waterways including wild and scenic rivers:

The Mummel River, which has formed a deep V-shaped gorge, or gulf, between high ridges, runs through the middle of the national park. The Mummel River, a watercourse of the Manning River catchment. Mummel River rises on the eastern slopes of the Great Dividing Range, below Mount Sugarloaf, southeast of Walcha and flows generally south by west, southeast, and then south southeast, joined by one minor tributary, before reaching its confluence with the Cooplacurripa River, north of Giro, northwest of Taree. The river descends 898 metres over its 65 kilometres course.

Catchment values:

Mummel Gulf National Park sits within the Manning catchment part of the NSW mid north coast. Bordered in the north-east by the Hastings catchment, in the north by the Macleay catchment, in the north-west by the Namoi catchment, south-west by the Hunter, and to the south by the Karuah catchment - the Manning catchment area is about 8,420 square kilometres.

Major water users relying on the catchment's rivers and estuarine resources include local councils, water utilities, conservation, livestock grazing (dairy), oyster farming, coal mining, gravel extraction, manufacturing, agriculture, forestry, fisheries and tourism.

Due to a high density of rural settlement, the region's rivers and estuaries tend to be affected by changed runoff conditions caused by land clearing, agricultural use, human settlement and recreation.

Most of the rivers and creeks in the Manning River basin are unregulated, with no major storages to capture and control flows. Most water users rely on natural flows or small structures, such as weirs for their water supplies. As in most unregulated rivers, flows are most affected during relatively dry times, when water is low and demand high.

About 22 per cent of the catchment is heavily timbered and managed by NSW State Forests and NSW National Parks & Wildlife Service for forestry, recreation, education, research and environmental purposes. Most of the forested areas are located on relatively steep country.

Coastal risk areas:

N/A

Wetland communities including SEPP 14 wetlands:

New Country Swamp EEC

Flora (including flora of conservation significance):

The mosaic of high elevation moist and dry open forest ecosystems supports a variety of flora in Mummel Gulf National Park. The most extensive forest ecosystems represented are open sclerophyll forests, including substantial areas of undisturbed old-growth forest.

A search of known records is at Attachment 4 together with maps showing locations. **As these contain sensitive information regarding the specific location of species they are not to be made publicly available.**

This section focuses on TSC Act listed species. EPBC Act listed species are discussed later in this REF

The following threatened flora species were identified within 5km of the proposed pilot trail, listed as **vulnerable** under the TSC Act:

- *Chiloglottis platyptera* (Barrington Tops Ant Orchid)
- *Pterostylis elegans* (Elegant Greenhood)

Both species above have been assigned to the [Keep-watch species](#) management stream under the NPWS *Saving our Species* program.



Barrington Tops Ant Orchid



Elegant Greenhood

There is no identified *Chiloglottis platyptera* (Barrington Tops Ant Orchid) or *Pterostylis elegans* (Elegant Greenhood) situated within the location of the proposed pilot trial.

Fauna (including fauna of conservation significance):

Mummel Gulf National Park is part of a major wildlife corridor that links Mummel Gulf through Enfield State Forest to Cottan–Bimbang National Park, Mount Seaview Nature Reserve, and Werrikimbe, Oxley Wild Rivers, Cunnawarra and New England National Parks. The park provides important habitat for a range of vertebrate fauna including several threatened species.

A search of known records and maps are at Attachment 4. **As these contain sensitive information regarding the specific location of species they are not to be made publicly available.**

The following threatened fauna species are identified within 5km of the proposed pilot trial, listed as **vulnerable** under the TSC Act:

- *Phyllorhina sphagnicolus* (Sphagnum Frog)
- *Litoria daviesae* (Davies' Tree Frog)
- *Calyptorhynchus lathamii* (Glossy Black-Cockatoo)
- *Ninox strenua* (Powerful Owl)
- *Tyto novaehollandiae* (Masked Owl)
- *Tyto tenebricosa* (Sooty Owl)
- *Climacteris picumnus victoriae* (Brown Treecreeper (eastern subspecies))
- *Daphoenositta chrysoptera* (Varied Sittella)
- *Pachycephala olivacea* (Olive Whistler)
- *Petroica boodang* (Scarlet Robin)
- *Petroica phoenicea* (Flame Robin)
- *Stagonopleura guttata* (Diamond Firetail)
- *Dasyurus maculatus* (Spotted-tailed Quoll)
- *Phascolarctos cinereus* (Koala)
- *Cercartetus nanus* (Eastern Pygmy-possum)
- *Petaurus australis* (Yellow-bellied Glider)
- *Macropus parma* (Parma Wallaby)
- *Falsistrellus tasmaniensis* (Eastern False Pipistrelle)
- *Kerivoula papuensis* (Golden-tipped Bat)
- *Miniopterus schreibersii oceanensis* (Eastern Bentwing-bat)
- *Myotis macropus* (Southern Myotis)

The following threatened fauna species is identified within 5km of the proposed pilot trial, listed as **endangered** under the TSC Act:

- *Mixophyes balbus* (Stuttering Frog)



Ecological communities (endangered ecological communities and regionally significant communities):

No EECs occur within the immediate vicinity of the trial route.

Critical habitat declared under the TSC Act:

No critical habitat has been declared along or in the vicinity of the proposed track for the pilot trial.

SEPP 26 littoral rainforest (or equivalent):

Warm temperate rainforests dominated by mixtures of coachwood (*Ceratopetalum apetalum*), corkwood (*Caldcluvia paniculosa*), sassafras (*Doryphora sassafras*), prickly ash (*Orites excelsa*) and crabapple (*Schizomeria ovata*) occupy the moister, fire-sheltered gullies particularly in the lower altitude sections of the park. On drier sites, brush bloodwood (*Baloghia inophylla*) and socketwood (*Daphnandra sp.*) are common dominants, while subtropical rainforest dominated by red cedar (*Toona ciliata*), yellow carabeen (*Sloanea woollsii*), black booyong (*Heritiera actinophylla*) and/or rosewood (*Dysoxylum fraserianum*) is present on some lower altitude sites, presumably in areas with richer soils.

No littoral rainforest within the meaning of SEPP 26 occurs along the proposed route of the wilderness pilot.

SEPP 44 koala habitat:

No feed trees or core habitat within the meaning of SEPP 44 occur along the proposed track route of the proposed wilderness pilot.

Wilderness (either nominated or declared):

An area of approximately 10,700 hectares within Mummel Gulf National Park has been declared wilderness. The proposed trial route passes through the Mummel Gulf wilderness area.

Aboriginal cultural heritage:

Mummel Gulf National Park is primarily in the traditional country of the Biripai people but also adjoins the traditional country of the Thungutti/Dunghutti, Anaiwan and Nganyaywana peoples.

Evidence from studies on the New England Tablelands shows that Aboriginal groups have been in the area for at least 4,200 years; however, it is not specifically known how the national park was utilised by Aboriginal people. A small number of artefacts have been located in the former Dicks Hut area. The area would have provided a wide variety of fruits and edible plants as well as a range of fauna species.

A desktop search was undertaken of the Aboriginal Heritage Information Management System (AHIMS). Search results and maps are at Attachment 3. **As these contain sensitive information regarding the specific location of species they are not to be made publicly available.**

Several sites were in proximity of the trial location, comprising artefacts, but are considered to be at low risk of adverse impact due to the nature of the activity and its confines to the existing management trail.

National/state/local natural or cultural heritage values:

No items in Mummel Gulf National Park are listed on the NSW State Heritage Register.

Ruins associated with the Dicks Hut area have local historical significance.

Vegetation of cultural landscape value:

(e.g. gardens and settings, introduced exotic species, or evidence of broader remnant land uses)

Mummel Gulf National Park is part of a large continuous tract of undisturbed-forested land including various areas managed by NPWS, Forests NSW, freehold and leasehold country extending along the edge of the eastern escarpment of the New England Tableland and plateau from Dorrigo to the upper Manning Valley.

There are some exotic species associated with the Dicks Hut / Dicks house ruins.

Other cultural heritage values:

The park contains items of historic heritage significance. A desktop survey was undertaken of the NPWS Historic Heritage Places Register (HHIMS). Search results and maps are at Attachment 3. **As these contain sensitive information regarding the specific location of species they are not to be made publicly available.**

The explorer John Oxley passed by the Apsley Falls in September 1818 and travelled eastwards through this area en route to Port Macquarie. Timber-getters and illegal settlers soon followed. The Wool Road (now the Oxley Highway), was built through here in 1842 with convict labour to link the wool-growing settlement of Walcha with Port Macquarie. Cedar getters began logging of the general area in the 1860s, with several small mills established on the southern New England Tablelands. Many of the current roads and trails in the area follow original routes associated with logging operations that opened up the area. The area which is now Mummel Gulf National Park was previously part of Enfield State Forest. General purpose logging of rainforests accelerated from 1945 until it was phased out in 1974, with selective logging continuing until 1985.

In 1992 North-East Forest Alliance Forest (NEFA) protesters set up a camp in what is now Mummel Gulf National Park. NEFA protested against logging here and won an agreement to delay logging to allow a joint study by NEFA and the state Forestry Commission. Mummel Gulf National Park was created in 1999, as part of the national regional forest agreement process

The rich geology within the area led to mining for gold and manganese. The main mining periods were 1890-1900, the 1920s and 1930s during the Depression, and 1954-1966. The mines were not very successful and were generally small claims exploring surface veins and alluvial traces.

The Dicks Hut Lease area contains the remains of two huts and some artefacts of mining activity.

Recreation values:

The park receives a low level of visitor use. Visitors are predominantly involved with self-reliant recreational activities such as picnicking, camping, bushwalking, scenic driving, cycling, horse riding and recreational remote fishing.

Recreational horse riding is an activity primarily undertaken along the Bicentennial National Trail, Panhandle Fire Trail, Porters Camp Road, Mummel Fire Trail and Daisy Patch Road, with overnight with horses is allowable at New Country Swamp only. No camping with horses is allowable in the declared wilderness area.

The park is traversed by the Bicentennial National Trail (BNT), an important multi-purpose trail available to horse riders that extends down the east coast of mainland Australia from Cooktown in far north Queensland to Healesville in Victoria.

Scenic and visually significant areas:

The aesthetic qualities of Mummel Gulf National Park are exceptional, diverse and seasonally-changeable. The beauty of the place stems from a mix of topographic features including steep-sided river valleys, pristine sub-tropical forests and rugged landscape of steep gorges and valleys. In particular the high scenic and visual quality of the large areas of sub-tropical rainforest in pristine condition. Wilderness areas of the national park are deeply valued for cultural, spiritual and aesthetic reasons.

Education and scientific values:

There is great potential for both scientific and education activities within the area. The surrounding bushland offers unique opportunities for the study of a variety of flora and fauna.

Interests of external stakeholders (e.g. adjoining landowners, leaseholders):

The park is generally surrounded by State Forest. The park is valued for its bushland backdrop, providing high quality visual amenity.

Matters of National Environmental Significance under the EPBC Act:

Mummel Gulf National Park contains nationally listed species listed under the EPBC Act. A search of listings was undertaken using the EPBC Act protected matters search tool and a copy is available at Attachment 4.

8. Impact assessment

This part of the REF provides an analysis of all possible impacts from the proposed activity and a description of any proposed mitigation measures. Section 3.7 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance on impact assessment and mitigation measures.

8.1 Physical and chemical impacts during construction and operation				
Section 3.8 of <i>Proponents Guidelines for the Review of Environmental Factors</i> provides further guidance				
	Applicable?*	Impact level (negligible, low, medium or high; negative or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Is the proposal likely to impact on soil quality or land stability?	<input checked="" type="checkbox"/>	Low Negative	Increased use of the trails has the potential to impact on soil quality due to compaction and erosion. Trail incision, trail width, water ponding, siltation	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20. No camping permitted in wilderness. Access closures consistent with standard park management practice. Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure
2. Is the activity likely to affect a waterbody, watercourse, wetland or natural drainage system?	<input checked="" type="checkbox"/>	Low Negative	The proposed pilot route crosses existing streams and watercourses. Impacts may arise due to bank trampling and depositing of waste materials.	As per Issue 1 above. In addition, horse riders are encouraged to abide by the Code of Conduct, which includes guidance on stream crossings.
3. Is the activity likely to change flood or tidal regimes, or be affected by flooding?	<input type="checkbox"/>	N/A	N/A	
4. Is the activity likely to affect coastal processes and coastal hazards, including those projected by climate change (e.g. sea level rise)?	<input type="checkbox"/>	N/A	N/A	

8.1 Physical and chemical impacts during construction and operation

Section 3.8 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Impact level (negligible, low, medium or high; negative or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
5. Does the activity involve the use, storage, or transport of hazardous substances or the use or generation of chemicals, which may build up residues in the environment?	<input type="checkbox"/>	N/A	N/A	
6. Does the activity involve the generation or disposal of gaseous, liquid or solid wastes or emissions?	<input checked="" type="checkbox"/>	Low Negative	Small amounts of manure will be deposited on the trail during the trial period.	Group size limits and the remote nature of the location will reduce the risks of large amounts of manure being produced. The monitoring framework includes a focus on weeds, which may be attributable to manure deposit.
7. Will the activity involve the emission of dust, odours, noise, vibration or radiation in the proximity of residential or urban areas or other sensitive locations?	<input type="checkbox"/>	N/A	N/A	No construction is proposed for the pilot. The proposed trail utilises existing management trails.

* If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

8.2 Biological impacts during construction and operation

Section 3.9 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Is any vegetation to be cleared or modified? (includes vegetation of conservation significance or cultural landscape value)	<input type="checkbox"/>	N/A		No vegetation is proposed to be cleared for the pilot. The proposed trail utilises existing management trails. Routine maintenance (such as removal of debris from the trail) may occur from time to time in accordance with standard management practices.
2. Is the activity likely to have a significant effect on threatened flora species, populations, or their habitats, or critical habitat? [refer to threatened species assessment of significance (7-part test)]	<input checked="" type="checkbox"/>	Low Negative	Threatened species of flora have been identified within 5km of the area. No critical habitat has been identified in the area of the pilot route.	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20. No camping permitted in wilderness. Access closures consistent with standard park management practice. Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure
3. Does the activity have the potential to endanger, displace or disturb fauna (including fauna of conservation significance) or create a barrier to their movement?	<input checked="" type="checkbox"/>	Low Negative	Threatened fauna species have been identified in the area. The activity has a small potential to disturb fauna.	The proposed activity is unlikely to have a significant impact on fauna species, due to the transitory and casual nature of the activity. Group size limits, no camping, and the monitoring program will also reduce potential fauna impacts.
4. Is the activity likely to have a significant effect on threatened fauna species, populations, or their habitats, or critical habitat?	<input checked="" type="checkbox"/>	Low Negative	Threatened fauna species have been identified in the area.	See Point 3 above.

8.2 Biological impacts during construction and operation

Section 3.9 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
(refer to threatened species assessment of significance (7-part test))				
5. Is the activity likely to impact on an ecological community of conservation significance?	<input checked="" type="checkbox"/>	Low Negative	The wilderness landscape is of significant conservation value. Horse riding may impact on these values.	The activity has been designed to be consistent with the management principles for wilderness areas. Refer also to the measures in Point 2 above.
6. Is the activity likely to have a significant effect on an endangered ecological community or its habitat? (refer to threatened species assessment of significance [7-part test])	<input type="checkbox"/>	N/A	The activity is to only occur on existing management trails. No EECs are in the immediate vicinity of the proposal or likely to be impacted.	
7. Is the activity likely to cause a threat to the biological diversity or ecological integrity of an ecological community?	<input checked="" type="checkbox"/>	Low Negative	The activity is to only occur on existing management trails, minimising any threats to the biological diversity or ecological integrity of an ecological community.	Refer also to the measures in Point 2 above.

8.2 Biological impacts during construction and operation





Section 3.9 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
8. Is the activity likely to introduce noxious weeds, vermin, feral species or genetically modified organisms into an area?	<input checked="" type="checkbox"/>	Low Negative	Additional visitor use of the area, and introduction of horses, may increase the potential for the introduction of weeds and pathogens into the area	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20. No camping permitted in wilderness. Access closures consistent with standard park management practice. Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure. In addition, horse riders are encouraged to abide by the Code of Conduct, which provides guidance on reducing risk of weed introductions.
9. Is the activity likely to affect critical habitat?	<input type="checkbox"/>	N/A	N/A	
10. Is the activity consistent with any applicable recovery plans or threat abatement plans?	<input checked="" type="checkbox"/>	Low	The proposed activity, supported by the detailed environmental safeguards, will have no adverse impacts on the recovery strategies or actions for these species as detailed in the Saving Our Species program.	
11. Is the activity likely to affect any joint management agreement entered into under the TSC Act?	<input type="checkbox"/>	N/A	N/A	

* If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

8.3 Community impacts during construction and operation

Section 3.10 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Is the activity likely to affect community services or infrastructure?		Low Positive	Horse riding wilderness pilot will increase opportunity for local community horse riding groups to experience the park and wilderness environment.	One of the primary reasons the Mummel Gulf National Park was selected for this pilot was due to community interest in further horse riding opportunities in this locality. The pilot is located in the central section of Mummel Gulf NP where no horse riding opportunities currently exist. The monitoring framework includes a social component to assess visitor and user experiences.
2. Does the activity affect sites of importance to local or broader community for their recreational or other values or access to these sites?		Low Positive Low Negative	The provision of access to these trails supports community interest in additional horse riding opportunities in the park. Currently, the trails are used by bushwalkers. There is some potential for conflict with horse riders.	The use of remote cameras will provide data on the frequency and intensity of trail use by horse riders and others. The social component of the monitoring framework will assist in determining any impacts (positive or negative) on park visitor experiences associated with the trial. In addition, NPWS will maintain existing communication channels with horse riders and other user groups
3. Is the activity likely to affect economic factors, including employment, industry and property value?		Low Positive	Horse riding wilderness pilot will increase opportunity for local horse riding groups to experience the park environment.	Local businesses may benefit from passing tourist trade and increased recreational visitors to the park.
4. Is the activity likely to have an impact on the safety of the community?		Low Negative	Parts of the trail are rugged and challenging. Interactions between horse riders and other users may create some risks.	Information material will be provided on the OEH web advising riders of the nature of the trail. The social component of the monitoring framework will assist in determining any impacts (positive or negative) on park visitor experiences associated with the trial. In addition, NPWS will maintain existing

8.3 Community impacts during construction and operation

Section 3.10 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
				communication channels with all user groups. Also, consistent with standard approaches and codes of conduct, it is expected that all trail users will be respectful of one another and give way in appropriate circumstances. NPWS will implement compliance and enforcement steps in accordance with standard operational practice.
5. Is the activity likely to cause a bushfire risk?	<input type="checkbox"/>	N/A	N/A	NPWS will advise the local RFS that the trail is in use by horse riders for the two year period.
6. Will the activity affect the visual or scenic landscape? This should include consideration of any permanent or temporary signage (e.g.. signs advertising an event and related sponsorship.	<input checked="" type="checkbox"/>	Negligible Negative	Small scale, discrete signage will be used for remote cameras and trails (where necessary) and baseline monitoring sites will be marked by pegs and stakes.	No specific measures required. These have been designed to be discrete, consistent with preserving the wilderness values and visitor experience.
7. Is the activity likely to cause noise, pollution, visual impacts, loss of privacy, glare or overshadowing to members of the community, particularly adjoining landowners?	<input checked="" type="checkbox"/>	Low Negative	Increased use of the trail may impinge on the sense of isolation	Group size limits and the remote nature of the location mean it is unlikely that significant numbers of horse riders will be present at any one time. In addition, the length of the trail (11 km) means that substantial opportunities will remain for visitors to experience privacy and solitude. The social component of the monitoring framework will assist in determining any impacts (positive or negative) on park visitor experiences associated with the trial

* If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

8.4 Natural resource impacts during construction and operation

Section 3.11 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Is the activity likely to result in the degradation of the reserve or any other area reserved for conservation purposes?	<input checked="" type="checkbox"/>	Negligible Negative	The proposed activity involves the increased usage on the area, therefore there is potential for some additional impact.	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20 and no camping permitted. Access trail closures consistent with standard park management practice. Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure.
2. Is the activity likely to affect the use of, or the community's ability to use, natural resources?	<input type="checkbox"/>	N/A	N/A	
3. Is the activity likely to involve the use, wastage, destruction or depletion of natural resources including water, fuels, timber or extractive materials? This should include opportunities to utilise recycled or alternative products.	<input type="checkbox"/>	N/A	N/A	

8.4 Natural resource impacts during construction and operation

Section 3.11 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
<p>4. Does the activity provide for the sustainable and efficient use of water and energy?</p> <p>Where relevant to the proposal, this should include consideration of high efficiency fittings, appliances, insulation, lighting, rainwater tanks, hot water and electricity supply.</p>	<input type="checkbox"/>	N/A	N/A	

* If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

8.5 Aboriginal cultural heritage impacts during construction and operation

Section 3.12 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance. Addressing matters 1-5 will assist in meeting requirements set out in OEH's 'Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW'..

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Will the activity disturb the ground surface or any culturally modified trees?	<input type="checkbox"/>	N/A	N/A	No construction is proposed for the pilot. The proposed trial utilises existing management trails.
2. Does the activity affect known Aboriginal objects or Aboriginal places? Include all known sources of information on likely presence of Aboriginal objects or places, including AHIMS search results.	<input checked="" type="checkbox"/>	Negligible Negative	Recorded Aboriginal sites exist within the vicinity of the trail route, but impacts are avoidable and unlikely	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20 and no camping permitted. Access trail closures consistent with standard park management practice.
3. Is the activity located within, or will it affect, areas containing the following landscape features? <ul style="list-style-type: none"> • within 200m of waters*; • within a sand dune system*; • on a ridge top, ridge line or headland; • within 200m below or above a cliff face; or • within 20m of or in a cave, rock shelter or a cave mouth. 	<input checked="" type="checkbox"/>	Low negative	The proposed activity passes through various landscape features, including on a ridge top and within 200m of water.	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20 and no camping permitted. Access trail closures consistent with standard park management practice.

8.5 Aboriginal cultural heritage impacts during construction and operation

Section 3.12 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance. Addressing matters 1-5 will assist in meeting requirements set out in OEH's 'Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW'..

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
*see REF Proponents Guide for definitions.				
4. If Aboriginal objects or landscape features are present, can impacts be avoided?	<input checked="" type="checkbox"/>	Negligible Negative	Recorded Aboriginal sites exist within the vicinity of the trail route, but impacts are avoidable and unlikely	Existing trails are already highly modified and riders are required to stay on these. Group size limit of 20 and no camping permitted. Access trail closures consistent with standard park management practice.
5. If the above steps indicate that there remains a risk of harm or disturbance, has a desktop assessment and visual inspection^ been undertaken (refer to the Due Diligence Code)? <i>^ for activities proposed by OEH, at a minimum this should be undertaken by a OEH employee with Aboriginal Site Awareness training and relevant practical experience, as approved by an Area Manager</i>	<input type="checkbox"/>	N/A	There is no residual risk of harm that is not adequately addressed by the stated safeguards and mitigation measures	
6. Is the activity likely to affect wild resources or access to these resources, which are used or valued	<input type="checkbox"/>	N/A	N/A	

8.5 Aboriginal cultural heritage impacts during construction and operation

Section 3.12 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance. Addressing matters 1-5 will assist in meeting requirements set out in OEH's 'Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW'..

	Applicable?*	Likely impact (negligible, low, medium or high negative or positive; or N/A)	Reasons (describe the type, nature and extent of the impact, the nature of the receiving environment and any proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
by the Aboriginal community?				
7. Does the activity affect areas subject to Native Title claims?	<input type="checkbox"/>	N/A	N/A	

* If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

Notes:

- If the above assessment indicates that there is still a reasonable risk or potential that Aboriginal objects, Aboriginal places or sensitive landscape features could be adversely affected by a proposal, then consistent with the precautionary principle it should either be re-considered or further detailed investigations undertaken.
- If it is concluded that an activity will have unavoidable and justified impacts on Aboriginal objects or Aboriginal places then the proponent should consider applying for an AHIP under Section 90 of the NPW Act.

8.6 Other cultural heritage impacts during construction or operation

Section 3.13 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

	Applicable?*	Likely impact (negligible/ maintenance, minor, major, contentious; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. What is the impact on places, buildings, landscapes or moveable heritage items?	<input checked="" type="checkbox"/>	Minor	Historic ruins located in the Dicks Hut area contain the remains of two huts and some artefacts of mining activity.	No camping with horses in the wilderness areas as part of the trial. Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure.
2. Is any vegetation of cultural landscape value likely to be affected (e.g. gardens and settings, introduced exotic species, or evidence of broader remnant land uses)?	<input type="checkbox"/>	N/A	N/A	

*If yes, all columns need to be completed. If no, write 'N/A' in the second and third columns

8.7 Matters of national environmental significance under the EPBC Act

Section 3.14 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance. Also refer to guidelines produced by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities

	Applicable?*	Impact level (negligible, low, medium or high; negative or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
1. Is the proposal likely to impact on matters of national environmental significance under the EPBC Act, as follows:				

8.7 Matters of national environmental significance under the EPBC Act

Section 3.14 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance. Also refer to guidelines produced by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities

	Applicable?*	Impact level (negligible, low, medium or high; negative or positive; or N/A)	Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact)	Safeguards/Mitigation Measures
<ul style="list-style-type: none"> Listed threatened species or ecological communities 	<input checked="" type="checkbox"/>	Low Negative	Threatened species listed under the EPBC Act (1999) have been identified in the vicinity of the proposed pilot area. Refer Attachment 4D. No significant impacts are likely given nature of the activity and the safeguards applied.	<p>Existing trails are already highly modified and riders are required to stay on these.</p> <p>Group size limit of 20 and no camping permitted. Access trail closures consistent with standard park management practice.</p> <p>Implement the monitoring framework and initiate identified management interventions if monitoring thresholds are triggered. Interventions may range from rider education, to rehabilitation or trail closure.</p>
<ul style="list-style-type: none"> Migratory species protected under international agreements 	<input type="checkbox"/>	N/A	N/A	
<ul style="list-style-type: none"> Ramsar wetlands 	<input type="checkbox"/>	N/A	N/A	
<ul style="list-style-type: none"> Commonwealth marine environment 	<input type="checkbox"/>	N/A	N/A	
<ul style="list-style-type: none"> World heritage properties or national heritage places 	<input type="checkbox"/>	N/A	N/A	

Note:

- Referral to the Commonwealth may be required if the activity is likely to have a significant effect on matters of national environmental significance. Refer to the Significant Impact Guidelines at: <http://www.environment.gov.au/epbc/publications/nes-guidelines.html>

9. Proposals requiring additional information

Only complete the following sections if **applicable** to the proposal.

9.1 Lease or licence proposals under s.151 NPW Act

Section 2.2 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance

Proponents must complete and submit a **Sustainability Assessment** together with the REF. This also applies where OEH is the proponent for projects of the kind listed in s.151A, NPW Act.

For information on the sustainability assessment criteria and guidelines, including assessment templates, go to: <http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm>

Note that for **minor activities and uses** (usually events and similar proposals involving less than 400 people) a streamlined and combined REF and Sustainability Assessment template is available (**Template 1**).

Sustainability assessment attached as follows:

- Special activities and uses (involving more than 400 people) – Sustainability Assessment **Template 2**
- Built structures and facilities – Sustainability Assessment **Template 3**

9.2 Telecommunications facilities (s.153D, NPW Act)

Section 2.2 and Appendix 1 of *Proponents Guidelines for the Review of Environmental Factors* provide further guidance

1. Are there feasible alternative sites for the facility on land that is not reserved under the NPW Act?	
2. Does the site of any above ground facility cover the minimum area possible?	
3. Is the facility to be designed and constructed to minimise risk of damage to the facility from bushfires?	
4. Has the site and construction of the facility been selected to, as far as practicable, minimise visual impacts?	
5. Is it feasible to use an existing means of access to the site?	
6. Is the facility essential for the provision of telecommunications services for land reserved under the NPW Act or for surrounding areas to be served by the facility?	

7. Will the facility be removed and the site restored as soon as possible after the facility becomes redundant (e.g. due to changes in technology)?	
8. Has the site been selected after taking into account the objectives set out in any plan of management relating to the land?	
9. If feasible, will the facility be co-located with an existing structure or located at a site that is already disturbed by an existing lease, licence, easement or right of way?	

If co-location is proposed, please indicate if:

- The proponent will be the owner of the facility
- The proponent will be a co-user of the facility

9.3 Activities within the Sydney Drinking Water Catchment

Activities within the catchment are subject to the provisions of the Drinking Water Catchments REP No.1

1. Does the activity incorporate any current recommended practices and performance standards endorsed or published by the Sydney Catchment Authority that relate to the protection of water quality?	
2. If the activity does not do so, how will the activity achieve outcomes not less than these?	
3. Will the activity have a neutral or beneficial effect on water quality?	

10. Threatened species assessment of significance (7 part test)

Address each of the factors set out in s 5A EP&A Act to decide whether there is likely to be a significant effect on threatened species, populations, ecological communities or their habitats, as set out below, or alternatively address the factors in a separate document. In preparing this section, refer to any relevant guidelines published by the DECCW.

Threatened species, populations and communities and critical habitats listed under both the *Threatened Species Conservation Act 1997* and *Fisheries Management Act 1994* should be included. Those listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) should not be included. Impacts on EPBC listed species should be addressed in section 8 above, or in a separate attached assessment. The proponent will still need to separately consider whether referral to the Commonwealth is required.

When you have completed the threatened species assessment of significance (7-part test), include the findings in Biological Impacts section.

List the species, populations and ecological communities, or their habitats which are likely to be affected by the proposal:

The following threatened species have been identified within 5 km of the trial location. Profiles for each species are included at Attachment 4C.

Flora

- *Chiloglottis platyptera* (Barrington Tops Ant Orchid)
- *Pterostylis elegans* (Elegant Greenhood)

Fauna

- *Philoria sphagnicolus* (Sphagnum Frog)
- *Litoria daviesae* (Davies' Tree Frog)
- *Calyptorhynchus lathami* (Glossy Black-Cockatoo)
- *Ninox strenua* (Powerful Owl)
- *Tyto novaehollandiae* (Masked Owl)
- *Tyto tenebricosa* (Sooty Owl)
- *Climacteris picumnus victoriae* (Brown Treecreeper (eastern subspecies))
- *Daphoenositta chrysoptera* (Varied Sittella)
- *Pachycephala olivacea* (Olive Whistler)
- *Petroica boodang* (Scarlet Robin)
- *Petroica phoenicea* (Flame Robin)
- *Stagonopleura guttata* (Diamond Firetail)
- *Dasyurus maculatus* (Spotted-tailed Quoll)
- *Phascolarctos cinereus* (Koala)
- *Cercartetus nanus* (Eastern Pygmy-possum)
- *Petaurus australis* (Yellow-bellied Glider)
- *Macropus parma* (Parma Wallaby)
- *Falsistrellus tasmaniensis* (Eastern False Pipistrelle)
- *Kerivoula papuensis* (Golden-tipped Bat)
- *Miniopterus schreibersii oceanensis* (Eastern Bentwing-bat)
- *Myotis macropus* (Southern Myotis)
- *Mixophyes balbus* (Stuttering Frog)

(a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

The activity is considered unlikely to place any viable local populations of the above species at risk of extinction. As designed, the trial will not involve habitat removal or loss or other actions that could impact habitat or local environmental conditions necessary to support these species.

Some of the listed species are subject to threats that may potentially arise from horses:

- *Pterostylis elegans* (Elegant Greenhood) – loss of habitat through weed invasion and trampling near camping areas
- *Tyto novaehollandiae* (Masked Owl) – grazing
- *Climacteris picumnus victoriae* (Brown Treecreeper (eastern subspecies)) – habitat degradation through grazing
- *Myotis macropus* (Southern Myotis) – reduction in stream water quality affecting food resources.
- *Macropus parma* (Parma Wallaby) – removal of understorey and shrubs by grazing
- *Phyllorhina sphagnicola* (Sphagnum Frog) – damage to streambank vegetation and changes in water quality and chytrid infection
- *Mixophyes balbus* (Stuttering Frog) – habitat modification and loss, changes to water quality and pathogens.

However, given the focus of the trial on existing management trails, group size limits, no camping, and the monitoring framework, the activity poses a very low risk to survival of local populations of these species.

(b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.

Not applicable. There are no recorded endangered populations in the immediate vicinity.

(c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:

- (i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or**
- (ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction**

Not applicable. There are no recorded EECs or critical EECs in the immediate vicinity that are likely to be affected.

(d) in relation to the habitat of a threatened species, population or ecological community:

- (i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and**
- (ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and**
- (iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality**

The activity is unlikely to involve any significant habitat removal, modification or fragmentation. The remoteness of the location combined with group size, no camping, and the focus of access along existing trails, will limit the prospect of habitat impacts to very low levels. The monitoring program will assist in early identification of any impacts in key locations and implementation of management responses.

(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).

Not applicable. There is no critical habitat in the vicinity.

(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.

The proposed activity, supported by the detailed environmental safeguards, will have no adverse impacts on the recovery strategies or actions for these species as detailed in the Saving Our Species program.

(g) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

Not applicable. The activity is not part of a key threatening process nor will it contribute to the operation of or exacerbate a key threatening process.

11. Summary of impacts

Summarise the impacts and consider the cumulative impacts of the activity based on the classification of individual impacts as low, medium or high adverse, negligible or positive.

Section 3.15 of *Proponents Guidelines for the Review of Environmental Factors* provides further guidance.

Category of Impact	Significance of impacts		
	Extent of impact	Nature of impact	Environmentally sensitive features
Physical and Chemical	Low	Negative	Low-Med
Biological	Low	Negative	Low-Med
Natural Resources	Negligible	Negative	Low
Community	Low	Positive	Low
Cultural Heritage	Low	Positive	Low

12. Conclusions

In conclusion indicate if:

- there is likely to be a significant effect on the environment and an environmental impact statement is required?



No



Yes

Reason(s):

The location of the activity on existing trails, combined with controls on group sizes, no camping, and the monitoring framework, will avoid risks of significant environmental impact. Where impacts arise the monitoring framework allows for early intervention and management response.

- there is likely to be a significant effect on threatened species, populations, ecological communities or their habitats and a species impact statement is required?



No



Yes

Reason(s):

The location of the activity on existing management trails, combined with controls on group sizes, no camping, and the monitoring framework, will avoid risks of significant environmental impact. Where impacts arise the monitoring framework allows for early intervention and management response. The species present or potentially present in the area are unlikely to be impacted by the activity, either by direct or indirect impacts.

- the activity is in respect of land that is, or is part of, critical habitat and a species impact statement is required?



No



Yes

Reason(s):

Critical habitat not present

- the activity will require certification to Building Code of Australia or Australian Standards in accordance with the OEH *Construction Assessment Procedure*?



No



Yes

Reason(s):

Not applicable

13. Supporting documentation

Please provide details of documentation included with this application. Supporting information may include, but is not limited to, a Sustainability Assessment (for proposals requiring a lease of licence under s.151A NPW Act), threatened species assessment of significance (7 part test), LEP land use tables, AHIMS search, engineering plans, maps, specialists studies etc.

Document Title	Author	Date
1. Adopted amendments to Mummel Gulf National Park Plan of Management	NPWS	February 2014
2. Submissions analysis report for plan of management amendments	NPWS	October 2013
3. OEH HHIMS & AHIMS (Heritage Items) and maps This contains sensitive site information and is not available for public release	NPWS	March 2014
4. OEH Wildlife Atlas (Fauna & Flora) and maps – 4A and 4B This contains sensitive site information and is not available for public release	NPWS	January 2014
4C. Threatened species profiles	OEH	Various
4D. EPBC Act search report	Commonwealth	March 2014
5. Draft monitoring framework	NPWS	February 2014
6. Baseline monitoring methods	NPWS	February 2014

14. Fees

Proponents are required to pay an initial fee of \$170 (a final fee is also required before determination of the REF).

If the activity consists of environmental remediation and the proponent is a community group, OEH may waive the fees on request.

<input type="checkbox"/>	\$170 payment/cheque for initial fee is enclosed
<input checked="" type="checkbox"/>	A waiver of fees is requested. Please provide reasons:
	Internal REF application by OEH/NPWS.

15. Signature of proponent

The REF must be certified by the proponent – not the consultant(s) where consultant(s) are used.

Signature	<i>Endorsed Melinda Murray</i>	Signature	
Name (printed)	Melinda Murray	Name (printed)	
Position	Director, Park Services and Strategy	Position	
Date	31.3.2014	Date	

Seal (if signing under seal):

OEH USE

- **External proponent REF or major REF**
 - ▶ proceed to prepare determination report and determination notice
- **Internal minor REF**
 - ▶ proceed to prepare determination notice (no determination report required)

Determination report templates, determination notices and model conditions are available at: <http://deccnet/epa/REFGuidelines.htm>