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NSW Department of Arts, Sport and Recreation

Southern Highlands Regional Shooting Complex Preliminary assessment

August 2006



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1. Introduction

1.1 Overview

This preliminary assessment accompanies the project application as the first step in the development application process for the proposed Southern Highlands Regional Shooting Complex, located near the village of Hill Top (referred to as 'the proposal' for the purposes of this report).

1.2 The proposal

The proposal involves the extension of the existing Hill Top Rifle Range, located on Wattle Ridge Road, into a regional shooting complex, comprising:

- » An additional rifle range;
- » A pistol range;
- » A shotgun range; and
- » Supporting facilities.

Further information on the proposal is provided in Section 3.

1.3 Site location and characteristics

The proposal would be located in the vicinity of the existing Hill Top Rifle Range, on a site that is in the process of being excised from the Bargo State Conservation Area, on Wattle Ridge Road, approximately 5.5 km northwest of the village of Hill Top in the Wingecarribee local government area (LGA). The regional location of the proposal is shown in Figure 1.1. The site location is shown Figure 1.2.

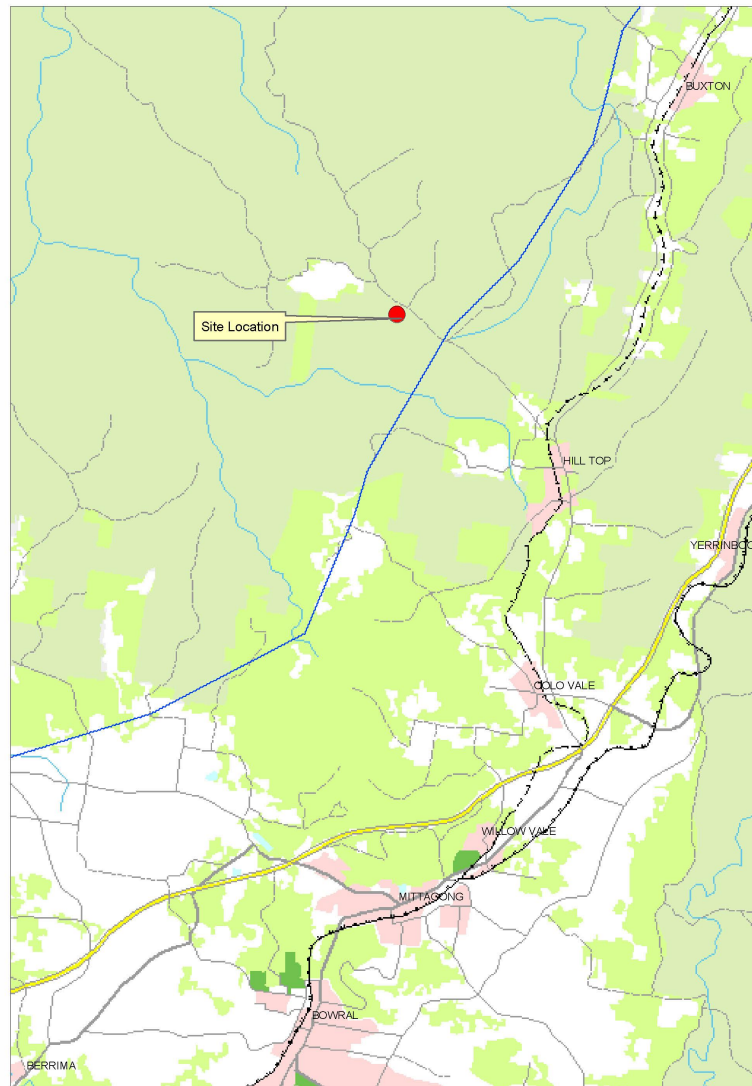


Figure 1.1 Regional location

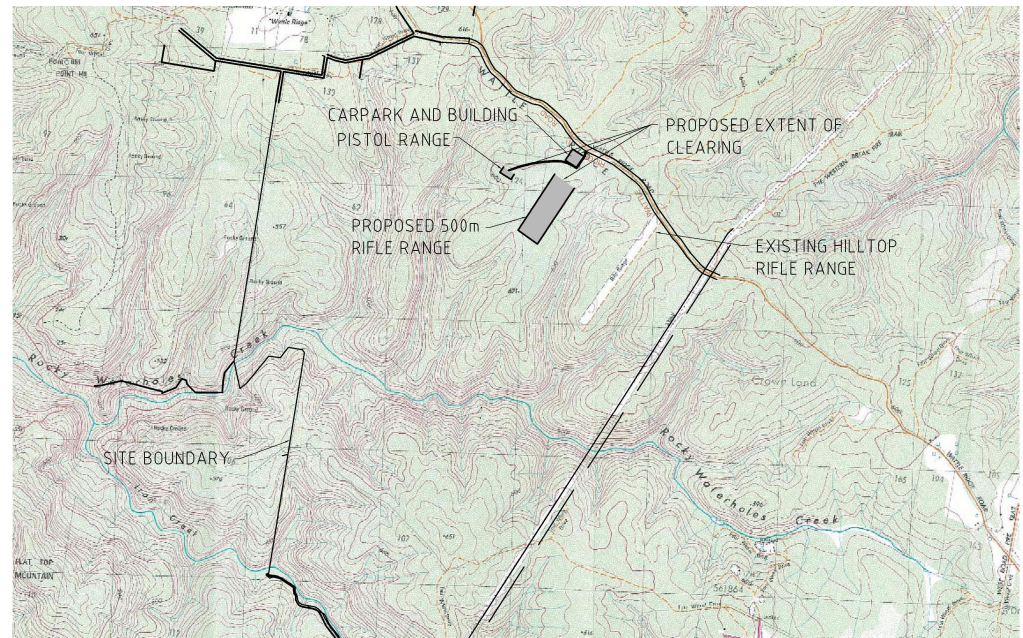


Figure 1.2 Site location

1,000 hectares of land will be excised from the Bargo State Conservation Area by means of the *National Parks and Wildlife (Adjustment of Areas) Act 2006* (yet to be proclaimed).

The new ranges and associated facilities would occupy an area of approximately 15 hectares within this land (referred to as 'the site' for the purposes of this report). The area occupied by the range and associated facilities would need to be cleared as part of the proposal. The remainder of the land (approximately 985 hectares) would be retained in its existing condition as a vegetation buffer zone. This area would act as a safety zone for the shooting complex when it is fully operational.

The site entrance would be located approximately 600 m further west of the entrance to the existing range. The site would be accessible via the unsealed Wattle Ridge Road. Nattai Reserves, part of the Greater Blue Mountains World Heritage Area, is accessible from the end of Wattle Ridge Road approximately 3 km away.

The site is surrounded by the Bargo State Conservation Area and as such is undeveloped. The site consists of native vegetation, which is likely to provide shelter and foraging resources for a number of bird, reptile and mammal species. Although slightly overgrown, there is evidence of some old access tracks through the site, which are likely to be old logging tracks (see Figure 1.3).



Figure 1.3 An area of the proposal site with an old access track

The site is located on a ridge and as such, the western boundary of the site is defined by a rocky outcrop, which drops away.

Rocky Waterholes Creek is located approximately 1.3 km south of the site and joins Nattai River, which forms part of the Warragamba Catchment Area.

There is a small dam at the entrance to the site (see Figure 1.4).



Figure 1.4 Small dam near the access to the proposed site



1.4 The proponent

The proponent for the proposal is the Department of Arts, Sport and Recreation. NSW Sport and Recreation, which is part of the Department of Arts, Sport and Recreation, is managing development of the proposal. NSW Sport and Recreation has engaged GHD to assist with preparation of the concept design and the project application process, including preparation of the environmental assessment.

1.5 Statutory context

1.5.1 Assessment requirements

In accordance with clause 75B of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Part 3A of the Act applies to the proposal because it meets the definitions of Major Sporting Facilities under clause 15(3) of schedule 1 of *State Environmental Planning Policy (Major Projects) 2005*, namely:

'Development for the purpose of a regional shooting complex where two or more shooting clubs or ranges within a defined region are consolidated into a single site.'

As a result, the Minister for Planning is the approval authority for the proposal, and an environmental assessment is required to support the application for development approval. This preliminary assessment has been prepared to initiate this process.

1.5.2 Site zoning/permissibility

The Wingecarribee Local Environmental Plan 1989 (the LEP) applies to the site. The site is zoned 1(a) (Rural "A" Zone).

The objectives of the zone are:

- a) to provide suitable land for agricultural use,
- b) to regulate the subdivision of rural land to ensure that actual or potentially productive land is not withdrawn from production and to prevent the fragmentation of viable rural holdings, particularly in those areas designated as having prime crop and pasture potential,
- c) to ensure identified extractive resources and mineral deposits are not rendered sterile from incompatible land usage,
- d) to enable mining and extractive industry to occur in an environmentally acceptable manner,
- e) to ensure subdivision is designed to maximise the retention of natural vegetation and to minimise the potential for significant alterations to the natural landform by way of construction of access driveways, excavations, filling and the like,
- f) to enable development for the purposes of tourism and recreation to occur in an environmentally acceptable manner,
- g) to ensure development is carried out in a manner that minimises risks from natural hazards, particularly bushfires and flooding,
- h) to recognise that rural localities cannot be economically provided with the level of services that apply in urban locations, and
- i) to recognise the value of the rural scenic landscape to the local tourist economy and to protect these areas from small holding rural subdivision.



Development consent provisions for zone 1(a) are provided below. It is noted that recreation facilities are *prohibited* in this zone.

2 Without development consent

Agriculture (other than dog breeding or boarding, lot feeding of livestock, pig keeping and poultry farming); dams; exempt development as defined in clause 6A; recreation gardens.

3 Only with development consent

Any purpose other than a purpose included in Item 2 or 4.

4 Prohibited

Advertising structures; automotive businesses; boarding-houses; bulk stores; car repair stations; cluster housing; commercial premises; gas holders; generating works; industries (other than rural industries, local rural industries, extractive industries, offensive or hazardous industries or home industries); junk yards; liquid fuel depots; motor showrooms; recreation facilities; residential flat buildings containing more than 2 dwellings (other than single storey units for aged persons); road transport terminals; rural workers' dwellings; sale of bulky goods; service stations; shops (other than general stores having a floor area no greater than 100 square metres); showrooms; transport terminals; warehouses.

The proponent requests that the Minister consider listing the site as a State Significant Site in accordance with Clause 8 of *State Environmental Planning Policy (Major Projects) 2005* to enable the proposal to be permissible with development consent. A justification according to the criteria contained in the draft Guidelines for State Significant Sites is provided in Section 5 of this report.

1.6 Purpose and structure of this report

This preliminary assessment has been prepared to initiate the assessment of the proposal under Part 3A of the EP&A Act. This includes:

- » A request for Director-General's Requirements for the environmental assessment; and
- » Initiating the process of amending the zoning of the site, which will need to occur in parallel with the project application process.

The report provides the following information:

- » Information on the history of and background to the proposal (section 2);
- » A description of the characteristics and key features of the proposal (section 3);
- » An outline of the key issues for the environmental assessment (section 4); and
- » A justification for the rezoning in accordance with the criteria contained in the draft Guidelines for State Significant Sites (Department of Planning, July 2005) (section 5).



2. Background to the proposal

2.1 Objectives of the proposal

The objective of the proposal is to provide a consolidated regional shooting facility for recreational and competitive shooting purposes consistent with the NSW Government's Shooting Club Development Program. A key focus of that Program is to support the joint use of facilities where possible, to consolidate ranges threatened by urban encroachment or environmental issues and to provide long term security of tenure for shooting clubs.

The proposed Southern Highlands Regional Shooting Complex at the existing Hill Top rifle range site will meet the needs of shooting clubs in the Southern Highlands/Illawarra areas. It will provide a new facility initially for seven clubs including a number which have had no ranges of their own for several years or whose range leases are due to expire shortly.

2.2 Need for a regional shooting complex in the Southern Highlands/Illawarra area

Finding locations for facilities for recreational and competitive shooting is a complex issue requiring a high level of government involvement and coordination. Government involvement is necessary to ensure that the needs of recreational and competitive shooting is balanced with the wider community's interest in ensuring that facilities are well designed and located. Large tracts of land are needed to allow for the variety of shooting disciplines, including surrounding safe areas and configured land improvements to capture stray projectiles.

Shooting clubs need to be provided with access to safe and well regulated sites. Consistent with the objectives of the NSW Shooting Club Development Program, one means of providing infrastructure support is through the development of regional shooting facilities. Regional facilities enable the consolidation of ranges threatened by urban encroachment or environment issues. This approach also provides long-term security of tenure for shooting clubs.

Bringing shooting disciplines together into appropriate regional facilities provides significant benefits. Well governed regional committees can oversee, manage and promote their sport in a controlled manner, and in accordance with lease, firearm licence and compliance requirements.

Consolidating multiple shooting clubs and disciplines in regional facilities also frees up or reduces demand for other large tracts of land for shooting facilities. It also provides greater levels of certainty for shooting clubs whose current tenure is not secure and provides options for clubs whose current sites may not be appropriate.

Discussions facilitated by the Hon John Tingle MLC to identify a suitable site to establish a regional shooting complex were held with a number of Government agencies and the key shooting club stakeholders in the Illawarra, Shoalhaven and Southern Highland areas. Seven clubs expressed interest. These are the Southern



Highlands Rifle Club, Illawarra Regional Shooting Association, Illawarra Service Rifle Club, Kiama-Albion Park Rifle Club, '74' Pistol Club, Phoenix Pistol Club and Illawarra Branch, Sporting Shooters Association of Australia.

The existing Hill Top Rifle Range site was identified as a suitable site, with potential to be developed as a regional shooting complex for these Clubs.

2.3 Background to selection of the site at Hill Top and alternatives considered

As a result of the construction of the Mittagong bypass road in the late 1980s, the Southern Highlands Rifle Club was required by the then Department of Main Roads to vacate the range the club occupied at Welby. The Department of Main Roads indicated that it would assist the club secure an alternative site and develop it as a new range. The Hill Top site was then owned by the Forestry Commission and satisfied the required safety template framework. It is located within an area bounded by a power line, without any immediately adjoining urban areas, providing a high level of security for the range. Subsequently, the land was vested in the Minister for Conservation and is administered by the National Parks and Wildlife Service (NPWS).

The land is licensed from NPWS to the Southern Highlands Rifle Club until 2008 and there are no further options.

The site at Hill Top was identified as a potentially suitable site for a regional shooting facility for the following reasons:

- » There was an existing range with capacity to expand, providing significant benefits over establishment on a green field site;
- » A number of the clubs that were unable to use their original facilities or were threatened with closure at existing sites were using the facility at Hill Top already;
- » Surrounding land uses (Bargo Conservation Area) meant there would be certainty of land tenure in these areas and therefore minimal or no chance of urban encroachment; and
- » The site is geographically central to shooting clubs in the Southern Highlands and Illawarra regions.

Prior to the 1999 election the Government made a commitment to the Illawarra Regional Shooting Association that it would assist them in resolving issues surrounding the location and development of a regional shooting facility. The Premier's Department, followed by NSW Sport and Recreation, worked closely with the Illawarra Regional Shooting Association to locate a site for the proposed facility.

Alternative sites considered included sites at Dharawal and the Mellong Swamps.

The Illawarra Regional Shooting Association has a Crown Land lease from the Department of Lands (granted in 1994) for land adjacent the Dharawal State Conservation Area for the purpose of establishing a rifle range.

There are a number of significant conservation issues associated with this leasehold site and local environment groups were active in opposing the establishment of the



shooting facility. A development application for a facility on this site was called in by the Minister for Planning in 1999. The Association has since withdrawn their development application for the site and would relinquish their lease concurrent with the development of the proposal.

Similarly, the Mellong Swamps site was also found to have significant conservation values. This site is also now proposed as part of the State's national parks network.

Use of the Sydney International Shooting Centre (SISC) at Cecil Park was also considered. It was decided that the SISC was not suitable as it had insufficient land to accommodate an open fairway range and it is not located in reasonable proximity to the Southern Highlands and Illawarra regions.

On balance, land management agencies, including the Department of Environment and Conservation (DEC) and the Department of Lands, agreed that the consolidation of shooting activities at Hill Top was the best solution.

The establishment of the regional shooting facility would also provide for the long term future of the Phoenix Pistol Club, which is currently located within the Scheyville National Park. The Club's licence has expired and an annual consent has been issued by DEC until an alternative site for the Club becomes available.

2.4 Offset package

To implement the proposal, it was determined that land would need to be excised from the Bargo State Conservation Area (refer Section 2.5).

DEC agreed to the proposal on the basis that other jointly agreed lands were transferred to the Minister for the Environment and reserved under the *National Parks and Wildlife Act 1974* to offset the required excision of 1,000 hectares of land from the State Conservation Area. The following offset package was developed in consultation with the DEC and Department of Lands.

- » Addition of 552 hectares to the Yengo National Park - Crown land Portions 9 and 10 comprise part of the Mellong Swamps and are adjacent to Yengo National Park. The site was proposed as a potential reserve for some time as a result of its unique wetland features and value as a fauna habitat. The site was also previously identified as a possible option for the relocation of Phoenix Pistol Club from Scheyville National Park. The club is now committed to using the facilities at Hill Top.
- » Addition of 1,956 hectares to the Bargo State Conservation Area – the addition is Crown land that provides a crucial stepping stone in the ring of reserved lands around Sydney linking the Nattai and Blue Mountains National Parks to the Metropolitan Water Catchments in the east. These lands include the headwaters of the Bargo River and part of the Bargo gorge system that supports several species of threatened flora and fauna. This addition is part of the Government's 'Circle of Reserves' initiative.

Subject to the further development of the proposal, the following parcel of land would also be added to the NSW reserve system:

- » Dharawal State Conservation Area (323 hectares) – this land contains extensive areas of upland swamp and is considered to be of high conservation value for both its biological values and its catchment protection values. The addition is a long standing reserve proposal that has been announced by the Government for addition to the reserve system. The land is currently leased to the Illawarra Regional Shooting Association for the development of a rifle range. A condition of the Government's commitment to develop the proposal is the return of this land to the reserve system. The Illawarra Regional Shooting Association has formally withdrawn their development application for the site and the lease would be relinquished concurrent with the development of the proposal.

2.5 Relevant legislation and land tenure

The Crown Solicitor advised that DEC did not have the power under the *National Parks and Wildlife Act 1974* to extend the existing rifle range and issue a new licence for the proposal. As a result, a decision was made to excise the land from the Bargo State Conservation Area by way of legislation.

The *National Parks and Wildlife (Adjustment of Areas) Act 2006* was assented to on 11 April 2006. The Act is yet to be proclaimed.

The Act provides for the revocation of reservation under the *National Parks and Wildlife Act 1974* as state conservation area of land within Lot 100 in DP 1088254. The Act vests the excised land with the Minister for Arts, Sport and Recreation, consistent with s.9 of the *Sporting Venues Management Act 2002*.

The Act also provides for the proposed offset package, through the reservation of:

- » Land shown coloured pink on the map catalogued Misc R 00105 in the Department of Environment and Conservation under the *National Parks and Wildlife Act 1974* as Bargo River State Conservation Area; and
- » Land within Lots 9 and 10 in DP 753788 under the *National Parks and Wildlife Act 1974* as part of Yengo National Park.

The Act also amends the *Native Title (New South Wales) Act 1994*. This was necessary because the Department of Lands advised (confirmed by the Crown Solicitor) that parts of the proposed site were subject to an ongoing Native Title Application that involved in excess of 200 parties to the claim. The Crown Solicitor advised that it would be necessary to introduce legislation which directly vests the site in the relevant body that would be valid under s.24MA(a) and s.24 MD(1) of the Native Title Act 1993. Under these circumstances the 'right to negotiate' regime would not apply to the vesting.

In addition, the legislation provides for appropriate compensation if and/or when the claim or any other interest is determined. The Crown Solicitor also advised that in relation to the Native Title claim the parties are currently in mediation with a view to resolving the claim under a non-native title agreement. This process requires the applicants to withdraw their substantive claim. If the matter is settled on the basis of a



non-native title agreement, it will not include any form of monetary compensation or transfer of land.

2.6 Benefits of the proposal

The proposal would provide the following benefits:

- » Provision of a regional consolidated facility for recreational and competitive shooting in the Illawarra and Southern Highland areas, bringing together shooting facilities and ranges within a defined regional area consolidated into a single site, to facilitate coordinated management and operations;
- » Reduce the demand for other facilities in the region;
- » It would accommodate seven clubs, including the relocation of the Phoenix Pistol Club from Scheyville National Park; and
- » It would yield three highly significant and long anticipated additions to the NSW conservation reserve system (a total of 2,831 hectares). This includes two diverse and productive wetland areas within Dharawal State Conservation Area and Yengo National Park and a key regional corridor link joining the Greater Blue Mountains World Heritage Area to the southern water catchments and through to the Victorian border via the Morton National Park.

3. Description of the proposal

3.1 Existing facility at Hill Top

The existing Hill Top Rifle Range (see Figure 3.1 and Figure 3.2) comprises a single 800 metre long by 100 metre wide full-bore range. It consists of a seven-target range with firing points at 100 metre intervals from 100 metres to 800 metres. The targets are located adjacent to the stopbutt. There is also provision mid way along the range for shotgun target shooting using clay pigeons fired from a mobile launcher. Other facilities located on site include a small clubhouse (with toilets and change rooms), informal carpark and an unused caretakers cottage.

Shooters use the existing facility on most weekends. The peak number of shooters on site during competition days is approximately 85, not all of whom are able to shoot at any one time. The existing facility is also used by the Australian Army for training on approximately 90 days per year.



Figure 3.1 The existing 800m long rifle range (looking northeast) from the stopbutt



Figure 3.2 The existing rifle range stopbutt earth mound (located behind targets)

3.2 The proposal

Preliminary concept plans for the proposal are provided in Figure 3.3 and described in the following sections.

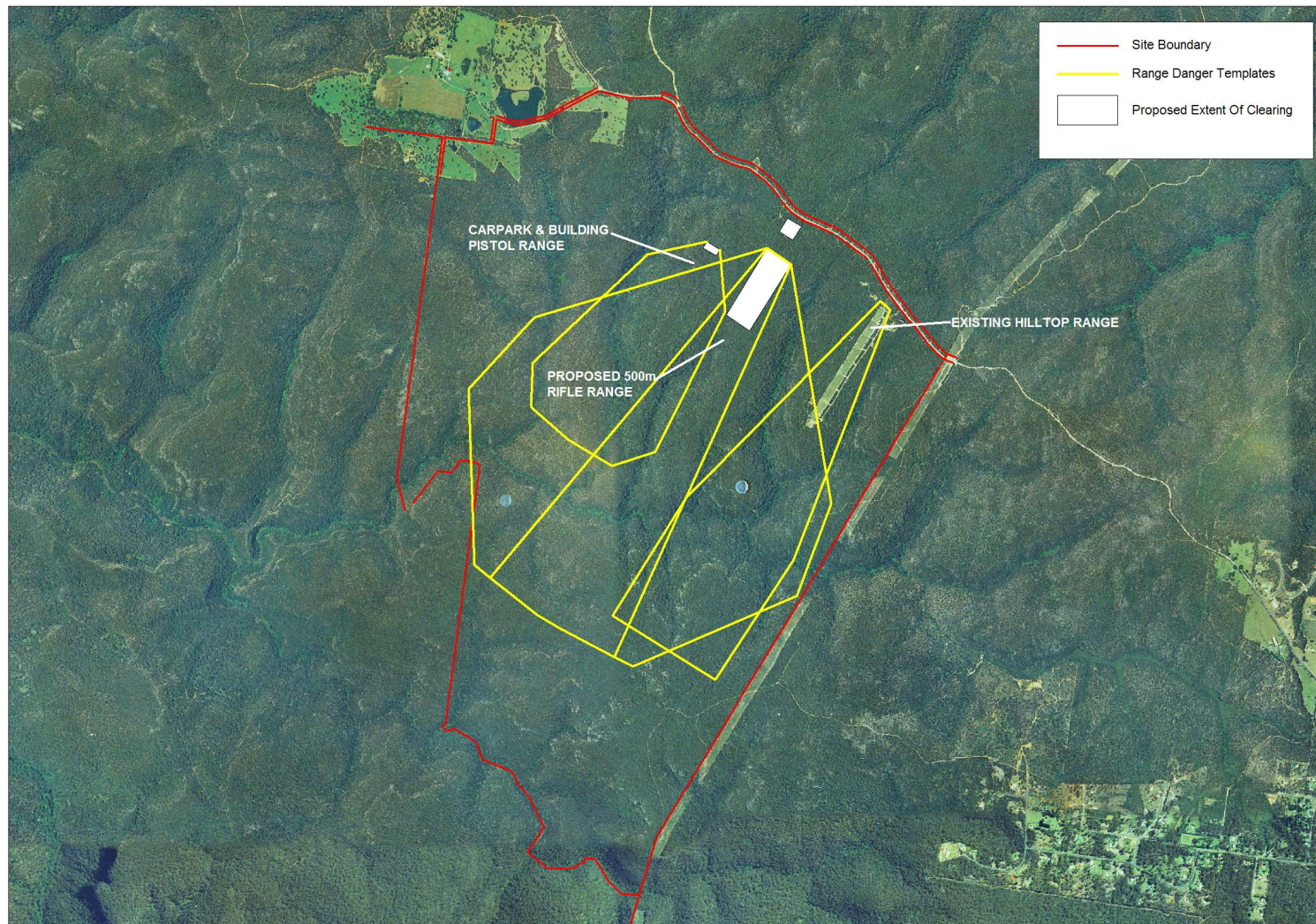


Figure 3.3 The proposal



3.2.1 Additional ranges

The proposal involves the development of the following ranges.

Additional open fairway rifle range

This range would be 500 metres long and 100 metres wide. It is proposed that this range would differ to the existing range in that all shooting would be done from one location with the targets being moved.

It would provide for the following:

- » All .22 rimfire events including metallic silhouette;
- » Centrefire benchrest;
- » Centrefire rifle events to 300 metres;
- » Big bore pistol metallic silhouette matches;
- » Class F centrefire rifle;
- » Field rifle;
- » Service rifle;
- » Black powder rifle;
- » Lever action rifle;
- » Single/western action;
- » Full bore rifle metallic silhouette.

Hard targets would be removed from the range when finished with. All targets would be positioned in front of stopbutts to prevent the escape of projectiles.

Pistol range

The range would be 50 metres long and 100 metres wide and would be divided into 3 sections, each section having different target distances (10m, 25m and 50m). Targets would be fixed in place.

It would provide for the following:

- » ISSF pistol events;
- » IPSC matches;
- » Western/single action;
- » Service pistol;
- » Black powder pistol matches;
- » NRA action pistol matches;
- » .22 rimfire rifle metallic silhouette.

Any hard targets would be positioned in front of stopbutts and protected by canopies to prevent the escape of projectiles to the sides. The range includes sidewalls



constructed to a minimum height of 2.4 metres for the entire length from the stopbutt to a point level with the 50 metre firing position.

Shotgun range

It is proposed to establish a shotgun range as part of the proposal. The range would be located adjoining the new 500m range. The range would have fixed firing points with several throwers.

Range design and features

The ranges are designed in accordance with NSW Range templates, which have been derived from military templates. The targeting system is expected to be manual.

Design and construction would also be undertaken in accordance with the United States Environmental Protection Agency (US EPA) Best Management Practices for Lead at Outdoor Shooting Ranges (June 2005), and would include:

- » Records of projectile usage for the range so that heavy metals can be tracked;
- » Stopbutts to capture bullets (designed to allow ready removal in the future so that metals can be disposed of appropriately);
- » Erosion controls including ponds to prevent heavy metals and sediments leaving the site; and
- » Lime to be spread around stopbutts to prevent infiltration of metals and lead into the groundwater.

3.2.2 Supporting facilities/infrastructure

The proposal also involves the development of:

- » Supporting facilities, including:
 - Clubhouse, which would incorporate changerooms, toilets and armoury.
- » Infrastructure, including:
 - 450 metre long access road (gravel) connecting to Wattle Ridge Road;
 - Diesel generator, solar panels and water supply tanks;
 - Informal parking for 75 cars;
 - Dams to contain water for water quality control and firefighting purposes.

3.2.3 Construction activities

The following construction activities are required to establish the additional ranges:

- » Clearing of access roads and ranges;
- » Establishment of erosion controls;
- » Bulk earthworks to create access roads and ranges. The ranges have been sited where possible to minimise the amount of earthworks;
- » Construction of shooting points, stopbutts and target points;



- » Construction of clubhouse and associated facilities;
- » Construction of shotgun range facilities.

All construction works are anticipated to be undertaken using conventional methods and equipment.

3.2.4 User groups

The facility would be used by the following:

- » Pistol/shooting clubs:
 - Southern Highlands Rifle Club, Illawarra Regional Shooting Association, Illawarra Service Rifle Club, Kiama-Albion Park Rifle Club, "74" Pistol Club, Phoenix Pistol Club and Illawarra Branch, Sporting Shooters Association of Australia.
- » Defence
 - The defence force currently uses the 800m range some 90 days per year. The development of new facilities at Holsworthy Barracks is likely to lead to a slight reduction in the use of the Hill Top range. The defence force activities are expected to remain concentrated on the existing 800m range.

3.2.5 Operational timing and usage

Estimates of user numbers include:

- » Weekdays – approximately 20-40 users between 9am to 5 pm
- » Saturdays – approximately 80 to 150 users between 9am to 5 pm

The Army would continue to use the facility up to approximately 90 days per year.



4. Preliminary environmental assessment

This section provides a brief overview of existing information on key environmental features based on a desktop review of site information. It identifies potential issues that will require detailed assessment in the environmental assessment, and provides an outline of the scope of studies that will be undertaken as part of the environmental assessment process.

4.1 Ecology

4.1.1 Overview

A preliminary desktop literature review was undertaken to identify threatened species and / or endangered ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and NSW *Threatened Species Conservation Act 1995* (TSC Act) previously recorded within the locality (a 10 kilometre (km) radius from the proposed site) or that may have the potential to occur at the site and any likely key ecological issues. Material reviewed included:

- » Department of Environment and Conservation (DEC) Threatened Species Database - searched for threatened species previously recorded in the locality (i.e. 10 km radius) (DEC 2006); and
- » The Commonwealth Department of Environment and Heritage (DEH) online database for Matters of National Environmental Significance (DEH 2006); and
- » Birds Australia Atlas of Threatened Species Records.

Limitations

Given that this assessment has been based solely on a desktop review of information provided by the DEC and DEH and that no site inspection has been undertaken, there is the potential for additional threatened species to those listed on the database searches to occur at the site. Information relating to vegetation mapping in the area has been sought but has not yet become available. Therefore information relating to vegetation communities in the area was not available for this preliminary assessment. Further information that would be used in the ecological assessment has been sought from:

- » Eco Logical Australia Pty Ltd 2003 The Wingecarribee Biodiversity Strategy. Report prepared for Wingecarribee Council;
- » Royal Botanic Gardens Threatened Flora Database Records; and
- » Australian Museum Fauna Database Records.

4.1.2 Existing environment – key features/characteristics

A brief assessment of the potential for threatened species to occur based on the results of the DEC threatened species database search is provided below. A number of Matters of National Significance listed under the *Environment Protection and Biodiversity Conservation Act 1999* also have the potential to occur within the locality

DEH identified two critically endangered ecological communities as potentially occurring within the area, namely, White Box / Yellow Box / Blakely's Red Gum Grassy Woodland and Derived Native Grassland and Turpentine-Ironbark Forest in the Sydney Basin Bioregion.

Many threatened fauna and flora species that have been recorded within a 10 km radius of the proposed site (DEC 2006), or for which potential habitat may exist in the locality (DEH 2006) are considered likely to occur in the vicinity of the site and its surroundings due to the intact status of the study area. Given that the proposed study site is surrounded by The Bargo State Conservation Area and contains bushland that is continuous with this conservation area, it is likely that the proposed site would contain vegetation communities of conservation interest and support habitat for an array of native flora and fauna.

A number of threatened flora species have been recorded within the locality including the Mittagong Geebung (*Persoonia glaucescens*), Hairy Geebung (*Persoonia hirsuta*), Camden White Gum (*Eucalyptus benthamii*) and Bynoe's Wattle (*Acacia bynoeana*). The Mittagong Geebung, Hairy Geebung and Bynoe's Wattle prefer dry sclerophyll forest and Bynoe's Wattle often occurs in disturbed areas along track edges, roadsides and recently burnt areas. The study site may provide suitable habitat for these and other threatened species recorded in the area.

The area is likely to provide for a range of fauna. Threatened birds such as the Brown Treecreeper (*Climacteris picumnus*), Regent Honeyeater (*Xanthomyza phrygia*); Swift Parrot (*Lathamus discolor*), Powerful Owl (*Ninox strenua*) and Masked Owl (*Tyto novaehollandiae*) have all been recorded in the locality and are considered likely to use the surrounding vegetated areas. Both the Glossy Black-cockatoo (*Calyptorhynchus lathami*) and the Gang-gang Cockatoo (*Callocephalon fimbriatum*) have been recorded in the locality (Birds Australia 2006) and are dependent on stands of *Allocasuarina* for feeding sites. The presence of hollow-bearing trees would provide suitable habitat for birds, such as owls, mammals, such as the Yellow Bellied Glider (*Petaurus australis*) and many microchiropteran bat species use hollows for roosting. Also, termite mounds may provide suitable habitat for Rosenberg's Goanna (*Varanus rosenbergi*) as this species is known to nest within termite mounds and these are considered a critical habitat component (DEC 2006). Habitat for amphibians may also be present along creeks and moist areas surrounding the site.

The study area falls within the Wingecarribee LGA and consequently State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP 44) applies. SEPP 44 aims to encourage the proper conservation and management of areas of



natural vegetation that provide habitat for Koalas in order to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. For an area to be considered potential Core Koala Habitat, appropriate tree species must represent at least 15 % of the total number of trees in the upper or lower strata of the tree component. Verification of the presence of Koala habitat or associated habitat on the site would be carried out during future field surveys. The Koala has been recorded within the locality and within the study area, it is therefore likely that there is the potential for the site to support Koala habitat.

Additional consideration will be given to creeks and any watercourses that are found to be in the vicinity of the study site. Encroachment into a riparian zone within 40 m of a creek requires consideration under the provisions of *Rivers and Foreshores Improvement Act (1948)*. The requirement for assessment under this Act will be determined after the site inspection is carried out.

4.1.3 Potential issues/impacts

Given that the site is located within Bargo State Conservation Area it is likely that intact ecosystems exist within and surrounding the proposed site. The records of threatened species within the area indicate that there may be potential habitat for a number of threatened flora and fauna species as well as endangered ecological communities within the study area. Further on-site investigations of the site would be required to verify the presence of suitable habitat for these and other species and the occurrence of any populations, communities or species listed under the TSC Act or EPBC Act.

1,000 hectares of land has already been excised from the Bargo State Conservation Area. This excision does not form part of the proposal. The proposal would involve clearing of approximately 15 hectares of vegetation. Both the clearing (which does form part of the proposal) and the excision would be offset by the proposed offset package involving addition of 2,831 hectares to the state reserve system.

4.1.4 Current commitments/mitigation measures

As noted in Section 2.4, DEC agreed to the proposal on the basis that other jointly agreed lands are transferred to the Minister for the Environment and reserved under the National Parks and Wildlife Act 1974 in order to offset the excision of land from the SCA. An offset package has been developed and will be implemented via the *National Parks and Wildlife (Adjustment of Areas) Act 2006*.

DEC has advised that the proposed revocation is consistent with the principles outlined in their 'Revocation of Land' policy. The policy states that compensatory land should be of greater size than the area of land to be revoked, have similar conservation values and where possible be adjacent to the reserve where land is being revoked. The compensatory lands are three times the size of the excision, have very high conservation values and two thirds are adjacent Bargo SCA.

In line with the revocation policy the proposal has also been presented to the National Parks and Wildlife Advisory Council and the Sydney South Regional Advisory



Committee. The Advisory Council are supportive of the proposal subject to the following:

- » Preparation of a land management plan with NPWS to continue to have an active role in site management and an appropriate financial contribution to the cost of land management by the complex; and
- » NPWS to have the opportunity to comment on the proposed lease agreement between the Department of Tourism, Sport and Recreation and the Range Management Committee, including the type and extent of any future development.

In response to the Advisory Council's recommendations DEC has advised the following:

- » The Department of Arts, Sport and Recreation is to liaise with DEC regarding the terms of the lease with the Range Management Committee;
- » The Range Management Committee is to prepare a Land Management Plan for the site with the assistance of DEC; and
- » The Plan is to identify the sites natural and cultural values, any threats to those values and appropriate management actions for the transferred lands.

4.1.5 Indicative scope of study

An ecological assessment will be undertaken as part of the environmental assessment.

4.2 Hydrology, surface water management and water quality

4.2.1 Existing environment – key features/characteristics

The proposed ranges are located on the top of an existing ridge that runs in a general north to south direction. The proposed ranges are not cut by any creeks. The ridge drops sharply into two tributaries of Rocky Waterholes Creek. After a distance of a kilometre the tributaries drain into Rocky Waterholes Creek, which flows in a direction from east to west. Rocky Waterholes Creek eventually discharges to the Nattai River, which eventually flows into Lake Burragorang, Sydney's main water supply.

The site appears to have been logged in the past but can currently be classified as being undeveloped. The area on top of the ridge is relatively flat and is heavily vegetated. There is no sign of any standing water on the site (other than the old dam near Rocky Waterhole Road).

The water quality leaving the site of the proposed ranges is expected to be good as a result of the undisturbed nature of the site.

4.2.2 Potential issues

As a result of the change in the land use it is expected that there would be some changes in the hydrological regime. The existing forest areas would be cleared and would be replaced with either largely grassed areas or gravel access tracks. This would result in faster runoff from the site (the volume of runoff is not expected to



change). The clearing of the land also means that erosion of soils may become a greater issue due to higher velocities and the clearance of vegetation.

The other main issue of concern is the potential for transport of metals (from bullets) off site.

4.2.3 Current commitments/mitigation measures/design features

The design of the proposal should minimise the amount of clearing required as far as possible. In addition it is proposed that the largest area possible would be grassed to reduce the amount of potential erosion and the rate of runoff. Controls would be implemented in accordance with best management practises for erosion and sediment control.

With regard to the rate of runoff it is proposed that water be directed through sedimentation ponds primarily to allow the settling of metals, but with the added benefit of reducing the rate of runoff.

The provision of stopbutts and the use of lime are expected to minimise the amount of heavy metal leaving the site. The provision of erosion controls and sedimentation ponds is expected to capture any other metals thus resulting in no decrease in water quality.

4.2.4 Indicative Scope of Study

The existing hydrology regime for the site will be determined. This information will be used to provide baseline information when designing the proposed controls. The controls will be modelled to ensure that there is no change in the existing hydrology and water quality regime.

4.3 Soils and groundwater

4.3.1 Existing environment – key features/characteristics

Hydrogeology

The 1975 Department of Mineral and Energy 1:5,000,000 Map entitled *Principal Groundwater Resources, Australia* indicates that the yield and quality of the groundwater in the area is suitable for most purposes, but yield is generally considered inadequate (low) for town supplies, industrial use and irrigation supplies.

A search of the Department of Natural Resources *Natural Resource Atlas* indicates that two registered groundwater bores are located within a 3 km radius of the site. One well (no information provided) is located down gradient of the site. The other well is located up gradient of the site and was drilled to a depth of 23 m for use as domestic stock supply. No information on water quality was provided for this well.

The 1987 Department of Water Resources 1:2,000,000 Map entitled *Assessment of Pollution Risk* indicates that the salinity of groundwater in the area can vary widely from high (>14,000 mg/L) towards the township of Hill Top to low (<1,000 mg/L)



towards the west. The main factor influencing the salinity of the groundwater appears to be related to the underlying geology of the site. No other indicators of pollution risk were noted.

Groundwater is expected to flow in a southerly direction across the site, from Wattle Ridge Road in the north to Rocky Waterholes Creek to the south of the site.

Geology

The Sydney Basin 1:500,000 *Geological Series Sheet* indicates that the site is underlain by Hawkesbury Sandstone. This comprises medium to coarse grained quartz sandstone with minor shale and laminate lenses. Minor amounts of Tertiary aged volcanic deposits are located in the Hill Top area, comprising basalt, dolerite, microsyentie and trachyte.

The Burratorang (9029-9129) 1:250,000 *Soil Landscape Series Sheet* describes the sites topography as rugged, rolling to very steep hills. The soils underlying the Hawkesbury Sandstone are described as shallow (<50 cm), discontinuous siliceous (quartz derived) sands associated with rock outcrops. Where shales replace sandstone as the dominant geology, the landscape becomes gently undulating crests, ridges and plateau surfaces. Soils derived from shales are moderately deep (50 - 150 cm), hardsetting clays.

4.3.2 Potential issues

Issues relating to impact on site soils, underlying bedrock and groundwater resources include:

- » Potential for contamination of the sites surface from lead and other contaminants used in the ammunition;
- » Potential for contamination of the surface water bodies, feeding into Rocky Waterholes Creek;
- » Potential for contamination of groundwater resources;
- » Potential impacts on the ongoing use of the site from a human health monitoring perspective.

4.3.3 Current commitments/mitigation measures/design features

In accordance with the US EPA *Best Management Practise for Lead at Outdoor Shooting Ranges*, various suggested measures / investigations should be taken to aid in the design of lead (and other contaminant) abatement measures for the proposal. As a preliminary indication, the following is a list of data that should be assessed for input into the design.

Environmental/contamination

- » Establish background concentrations of lead and other contaminants (if any) at the site and in adjacent water bodies; and



- » Understand previous site usage with regards to the current rifle range including identification previous contamination levels at the site.

Geological/hydrogeological

- » Undertake a geotechnical assessment of the area where stop butts and other infrastructure are to be positioned. Issues such as soil and slope stability, slip potential and other issues should be addressed in this assessment where possible;
- » Full characterisation of the soil types at the site including geochemical analysis (pH, redox potential, chemistry), amount of organic matter, soil type (clay / sand), physical parameters of the soil (including density, compaction, porosity, permeability etc); and
- » Establish depth to groundwater and develop a hydrogeological model. Geochemical baseline sampling of the groundwater, including pH, should be considered.

Hydrologic/surface water

- » Collect and analyse data including annual precipitation rate and rainfall intensity;
- » Undertake an assessment of the geochemistry (pH etc) of rain water and surface water;
- » Erosion (water and wind) potential;
- » Establish factors such as contact time of rainfall and surface water with soil type / lead shot;
- » Assess the sites surface water hydrology, drainage, flood potential and frequency;
- » Assess topographic slope and expected surface water gradient velocity; and
- » Ecological study including percentage vegetation cover of the ground surface.

Ecology

- » Health, phytotoxic and impacts on flora/fauna of plants due to increased contaminant levels in the soils and plants at the site should be considered.

4.3.4 Indicative scope of study

The study to be undertaken during the environmental assessment will consider:

- » Baseline contamination assessment of site soils and water quality in the adjacent waterway;
- » Consideration of existing topographical, geotechnical, hydrogeological and hydrological features of the site and surrounds as described above;
- » Development of recommended design features (consistent with the US EPA *Best Management Practise for Lead at Outdoor Shooting Ranges*) to ensure that the construction and operation of the proposal does not result in a detrimental impact on soil, water and groundwater quality; and



- » Development of recommended management measures (a site management regime), consistent with the US EPA *Best Management Practise for Lead at Outdoor Shooting Ranges*, to ensure that the construction and operation of the proposal does not result in a detrimental impact on soil, water and groundwater quality.

4.4 Indigenous heritage

The study area is located within the tribal boundaries of the Gandangara people. However, the study area is located close to what is understood to be a north-south trending boundary with the Gandangarra people occupying the country to the west and Wodi Wodi people living in the land to the east (Tindale 1974).

The study area is located within the boundaries of the Illawarra Local Aboriginal Land Council (ILALC) and the area of custodial interest of the Wodi Wodi Elders Corporation, the Korewal Eloura Jerrungarugh (KEJ) Tribal Elders Aboriginal Corporation, the Wadi Wadi Commaditchie Aboriginal Corporation and the Gundungara traditional owner group represented by the Northern Illawarra Aboriginal Collective (NIAC).

In addition to the above Aboriginal Community groups the study area lies within the registered Native Title Claim of the Gundungurra Tribal Council Aboriginal Corporation.

4.4.1 Existing environment – key features

A component of the Aboriginal Cultural Heritage Assessment was a site search of the AHIMS register maintained by the DEC. This site search showed that no Aboriginal sites had previously been recorded in the study area or in its immediate vicinity. The nearest recorded Aboriginal sites are located at the Wattle Ridge property approximately 2.5 km northwest of the study area. These sites consisted of artefact scatter and axe grinding grooves.

As the area has not been the subject of a heritage assessment previously it is necessary to carry out a surface survey to identify the location of any surface Aboriginal sites and any areas of sub-surface archaeological potential.

4.4.2 Potential issues

In the event that areas of indigenous heritage value (either surface finds or sub-surface area of potential) are identified within the study area then appropriate impact mitigation strategies would need to be implemented and approval sought. This approval would require the support of the DEC, which requires consultation with local Aboriginal communities regardless of the native title provisions.

Native title issues have been considered as part of the *National Parks and Wildlife (Adjustment of Areas) Act 2006* (refer Section 2.5 above).

The DEC has published interim guidelines for consultation with Aboriginal communities and consultation with local communities would be carried out in compliance with these guidelines.



4.4.3 Current commitments/mitigation measures

In the event that surface artefacts or areas of subsurface potential archaeological deposits are identified within the study area appropriate mitigation strategies will be devised and implemented to maintain the cultural heritage values of the area.

Representatives of all interested Aboriginal communities including the native title claimant group will be invited to participate in field surveys and their comments sought on the cultural significance of the area and proposed heritage mitigation strategies.

4.4.4 Indicative scope of study

The Aboriginal heritage cultural assessment would include:

- » Background search of site registers and documents;
- » Consultation with local Aboriginal communities;
- » Field survey of study area; and
- » Report prepared to the standards required by the DEC including mitigation recommendations.

4.5 Consultation

The following are considered to be the key stakeholders to be consulted during the environmental assessment.

Government agencies

- » Wingecarribee Shire Council;
- » Department of Environment and Conservation (including EPA, NPWS);
- » Sydney Catchment Authority;
- » Department of Natural Resources;
- » Department of Lands;
- » NSW Police;
- » RTA; and
- » Rural Fire Services.

The following consultation activities will be undertaken during the environmental assessment process:

Community

- » Hill Top residents;
- » Key local/regional green/environmental and community groups (groups to be confirmed by Council); and
- » Local member of the NSW Parliament (Member for the Southern Highlands – Peta Seaton).



4.6 Other

4.6.1 Bushfire hazard

The guidelines for building in bushfire prone areas '*Planning for Bushfire Protection*' were developed in 2001 by (then) Planning NSW in close consultation with the NSW Rural Fire Service. The requirements of *Planning for Bushfire Protection* do not generally apply to commercial, industrial or non-residential developments and as a result, the proposal will not require a formal bush fire safety authority under Section 100B of the *Rural Fires Act 1997*.

However, the potential for bushfire risk has been identified as an issue for consideration, as there is a history of bushfires in the area. Bushfires are highly likely to occur during the life of this development. Designated Bushfire Prone Land maps have been prepared for the Wingecarribee LGA. The study area has been mapped as supporting Bushfire Prone Land, Vegetation Category 1. For bushfire hazard this is the highest rating.

The Rural Fire Service has identified some preferences for asset protection zones and other bushfire protection measures for industrial and commercial developments on bush fire prone land. Should the proposal comply with the provisions of *Planning for Bushfire Protection* then it will pass assessment by the Rural Fire Service, otherwise negotiation on an agreed set of measures will have to be undertaken.

Generally the Rural Fire Service staff will consider non-residential developments using *Planning for Bushfire Protection* as a starting point. These guidelines need to be applied to the site and the potential for the proposal to conform to the requirements identified assessed. This would involve desk top and field assessment of relevant bushfire related data and information including vegetation type and extent, slope and other elements to identify factors for asset protection zones, building standards, water supply and access and egress for visitors and bushfire fighting vehicles. This will be undertaken as part of the environmental assessment.

4.6.2 Noise

The nearest noise sensitive receivers are located approximately 2.5 km northwest of the site (at 'Wattle Ridge'), 3.5 km to the south (dwellings to the west of Hill Top) and 3.5 km to the southwest (dwellings along Wattle Ridge Road).

A noise assessment will be undertaken to determine the potential for noise impacts associated with the proposal.

4.6.3 Traffic

During operation, it is estimated that the maximum number of people who would use the facility at any one time would be approximately 120 people, with estimated vehicle movements of approximately 100 cars in, and 100 cars out (200 vehicle movements). This level of use is likely to be spread out over the day, with the maximum number of users likely to be on the site at any one time estimated to be 85 people, with estimated



peak vehicle movements of 75 cars. Parking spaces for 75 cars would be provided as part of the proposal.

Council and the RTA will be consulted to determine any specific requirements in relation to the proposal.

4.6.4 Hazards and risk

It is not anticipated that a preliminary hazard assessment would be required, however the following tasks would be undertaken:

- » Identify possible risk scenarios, based on information provided;
- » Identify existing controls;
- » Screen the values against *State Environmental Planning Policy No. 33 Hazardous and Offensive Development*;
- » Relate to the known hazards to the sensitive areas identified. Determine significance of effects;
- » Review adequacy of existing controls. List additional mitigation and management measures needed.

4.6.5 Air quality

The main issue requiring management is expected to be the management of the potential for erosion and dust generation during construction, as a result of the clearing and earthworks proposed.

4.6.6 Ongoing site management

On going management of the site would be a high priority for the Department and the leaseholder. The Government would require that when the Southern Highlands Regional Shooting Complex is constructed, a Range Management Committee - equally representative of all users - be established to plan, coordinate and manage the site. A lease would be negotiated, in consultation with the DEC and Conservation, between the Department of Arts, Sport and Recreation and the established Range Management Committee.

One of the responsibilities of the Committee would be to work with representatives of the Department of the Environment and Conservation to prepare a Land Management Plan. The Plan would need to identify the sites natural and cultural values, any threats to those values and appropriate management actions for the site.



5. Justification for the rezoning

The proponent requests that the Minister consider listing the site as a State Significant Site in accordance with Clause 8 of *State Environmental Planning Policy (Major Projects) 2005* to enable the proposal to be permissible with development consent. The Department of Planning has advised that in order to initiate the rezoning process, the proponent must seek agreement from the Minister for Planning that the site is a potential 'State Significant Site' consistent with the criteria contained in the draft Guidelines for State significant Sites (July 2005).

The response to each of the criteria is provided below:

Criteria for a State Significant Site

A State Significant Site must be of State or regional planning significance because of its social, economic or environmental characteristics. When considering whether a site can be categorised as being of State significance, the Minister will consider whether the site meets one or more of the following criteria:

(a) be of regional or state importance because it is in an identified strategic location (in a State or regional strategy), its importance to a particular industry sector, or its employment, infrastructure, service delivery or redevelopment significance in achieving government policy objectives; or

As noted in Section 2, the objective of the proposal is to provide a consolidated regional shooting facility for recreational and competitive shooting purposes consistent with the NSW Government's Shooting Club Development Program. A key focus of that Program is to support the joint use of facilities where possible, to consolidate ranges threatened by urban encroachment or environmental issues and to provide long term security of tenure for shooting clubs.

The State Government determined that Government involvement was necessary to ensure that the needs of recreational and competitive shooting is balanced with the wider community's interest in ensuring that facilities are well designed and located. As a result, the proposal is deemed to be of regional and state importance.

Prior to the 1999 election the Government made a commitment that it would assist in resolving issues surrounding the location and development of a regional shooting facility. The Premier's Department, followed by NSW Sport and Recreation, has worked with other government agencies to locate a site for the proposed regional facility.

As noted in Section 2.3, a number of sites were considered in the Sydney/South Coast region in consultation with variation government agencies. Land management agencies, including DEC and the Department of Lands, have agreed that the proposed site was the most appropriate. The site is therefore considered to be of regional or state importance in meeting the need for a regional shooting facility in the Illawarra/South Coast area, and meeting the objectives of the NSW Government's Shooting Club Development Program.



(b) be of regional or state environmental conservation or natural resource importance in achieving State or regional objectives. For example protecting sensitive wetlands or coastal areas; or

Not applicable

(c) be of regional or state importance in terms of amenity, cultural, heritage, or historical significance in achieving State or regional objectives. For example sensitive redevelopment of heritage precincts; or

Not applicable

(d) need alternative planning or consent arrangements where:

(i) added transparency is required because of potential conflicting interests

(ii) more than one local council is likely to be affected.

As noted in Section 1.2, the proposal is currently prohibited by the zoning provisions for the site.

Need for Minister's intervention

As noted in Section 1.5, Part 3A of the EP&A Act applies to the proposal because it meets the definitions of Major Sporting Facilities under clause 15(3) of schedule 1 of State Environmental Planning Policy (Major Projects) 2005. As a result, the Minister for Planning is the approval authority for the proposal.

Given that Ministerial approval is required for the project application, it is considered appropriate that Ministerial approval for the rezoning also be sought in parallel with the project application process.



6. Conclusion

This preliminary assessment accompanies the project application as the first step in the development application process for the proposed Southern Highlands Regional Shooting Complex, located near the village of Hill Top (referred to as 'the proposal' for the purposes of this report).

The proponent requests that the Minister consider listing the site as a State Significant Site in accordance with Clause 8 of *State Environmental Planning Policy (Major Projects) 2005* to enable the proposal to be permissible with development consent. A justification according to the criteria contained in the draft Guidelines for State Significant Sites is provided.

The proponent also requests that the Department of Planning issue the Director-General's Requirements for the environmental assessment.

As a result of the preliminary assessment, it is considered that the key assessment requirements would be:

- » Ecology – an assessment of the potential impacts of the proposal (in particular, the proposed clearing) on significant flora and fauna species and communities;
- » Soil, water and groundwater quality – management measures to ensure that the construction and operation of the proposal does not result in a detrimental impact on soil, water and groundwater quality; and
- » Indigenous heritage – as the site is currently undisturbed, the potential for impact on sites and items of indigenous heritage significance should be determined.



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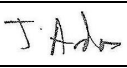
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