

# Review of Environmental Factors

## **Inverell Off-Road Recreational Circuit “Recreation Facility – Outdoor”**

### **LOCATION:**

Lot 10 DP 252287 and Lots 1 & 2 DP 1101540  
Lake Inverell Drive  
Inverell NSW 2360

Prepared By      Name: Anthony Alliston  
Position: Manager Development Services

## TABLE OF CONTENTS

1	INTRODUCTION .....	3
2	THE SITE AND LOCALITY .....	4
2.1	Site Description .....	4
2.2	The Site and Adjoining Uses .....	4
2.3	Site Characteristics .....	6
3	THE PROPOSED DEVELOPMENT .....	12
3.1	Lake Inverell Reserve – Plan of Management.....	12
3.2	Description of the Proposal .....	12
3.3	Design Considerations .....	15
3.4	Operational Details .....	15
3.5	Justification for the Proposed Development.....	15
4	PLANNING CONTROLS.....	17
4.1	State Environmental Planning Policy (Infrastructure) 2007.....	17
4.2	Inverell Local Environmental Plan 2012 .....	17
5	ENVIRONMENTAL ASSESSMENT – PART 5, EP&A ACT 1979 .....	18
5.1	Introduction.....	18
5.2	Traffic Management, Access and Parking.....	18
5.3	Flora and Fauna .....	19
5.4	Cultural Heritage .....	20
5.5	Adjoining Land – Barayamal National Park and Shooting Ranges .....	20
5.6	Noise .....	21
5.7	Lighting.....	21
5.8	Stormwater Management.....	22
5.8	Visual Impacts and Landscaping .....	22
5.9	Earthworks .....	22
5.10	Utility Services .....	22
5.11	Social and Economic Impact .....	23
5.12	Bushfire.....	23
5.13	Air Quality.....	23
5.14	Waste .....	24
5.15	Summary of Impacts.....	24
6	COMMUNITY CONSULTATION .....	25
6.1	Introduction.....	25
6.2	Discussion - Key Issues Raised in Submissions.....	25

7	MITIGATION MEASURES .....	29
7.1	Introduction.....	29
7.2	Measures .....	29
8	SUMMARY.....	32
	APPENDIX A – Site Plan & Car Parking Plan .....	33
	APPENDIX B – Flora and Fauna Assessment .....	34
	APPENDIX C – Cultural Heritage Assessment .....	35
	APPENDIX D – Map of Range Danger Areas .....	36
	APPENDIX E – Community Consultation Package and Submissions .....	37
	APPENDIX F – Assessment – Is an EIS Required?.....	38

## INTRODUCTION

Located in northern NSW, Inverell Shire has a population of 16,075 and covers an area of 8,600 square kilometres. Within two and a half hours drive from Tamworth and one and a half hours from Armidale, Inverell is developing as a regional centre in its own right and is becoming increasingly attractive as a tourist and holiday destination. Inverell Shire Council is committed to the preservation and protection of the Shires' natural environment and cultural heritage and aims to offer a high quality rural lifestyle.

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the proposed Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment that can be enjoyed by many user groups for a broad range of activities including:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, “Toughen Up” challenges, Triathlon, cycling and running events.

The site is located at the end of Inverell's existing network of public footpaths and cycle paths. The proposal will provide an extension of this in an environment protected from general traffic. The Circuit will also complement the adjoining passive and active recreation facilities and uses at the Lake Inverell Reserve.

The Circuit will primarily cater for general day-to-day public use and will share the existing parking and amenities at Lake Inverell Reserve. It is intended to limit use of the Circuit to daylight hours to respect the amenity of the locality.

In addition to an extension and upgrade of the existing Lake Inverell Reserve car parking area, some special event overflow parking is also proposed. The special event overflow parking will be contained within the site and will be managed through the use of locked gates, fencing and bollards to ensure minimal impacts on the area by traffic and to facilitate pedestrian and cyclist safety.

The site forms part of the Lake Inverell Reserve off the Gwydir Highway. The subject land is described as Lot 10 DP 252287 and Lots 1 and 2 DP 1101540 and has frontage to Lake Inverell Drive. The land is owned by Inverell Shire Council. The establishment of the Off-Road Recreational Circuit is consistent with the Plan of Management developed for the Reserve.

This Review of Environmental Factors describes the physical attributes of the site, outlines the relevant statutory planning and environmental framework and provides an overview of the development proposal. The report also contains discussion in relation to the possible environmental impacts of the proposal and the proposed mitigation measures.



## THE SITE AND LOCALITY

### 2.1 Site Description

The site forms part of the Lake Inverell Reserve off the Gwydir Highway, Inverell. The subject land is described as Lot 10 DP 252287 and Lots 1 and 2 DP 1101540 and has frontage to Lake Inverell Drive on the site's western boundary.

The site has a total area of approximately 19 hectares of the 150 hectare Lake Inverell Reserve. Inverell Shire Council own and manage the land, which is located on the eastern fringe of Inverell (**Figure 1**).

### 2.2 The Site and Adjoining Uses

The Inverell Off-Road Recreational Circuit site is located on the eastern fringe of the Inverell Township (**Figure 1**). It is bound by the Gwydir Highway and a residential property to the north, Lake Inverell Drive and residential land to the west, Lake Inverell to the south and Barayamal National Park to the east.

The site takes access off Lake Inverell Drive. Surrounding land uses include rural and residential properties, the balance of Lake Inverell Reserve and Barayamal National Park (**Figure 1**).

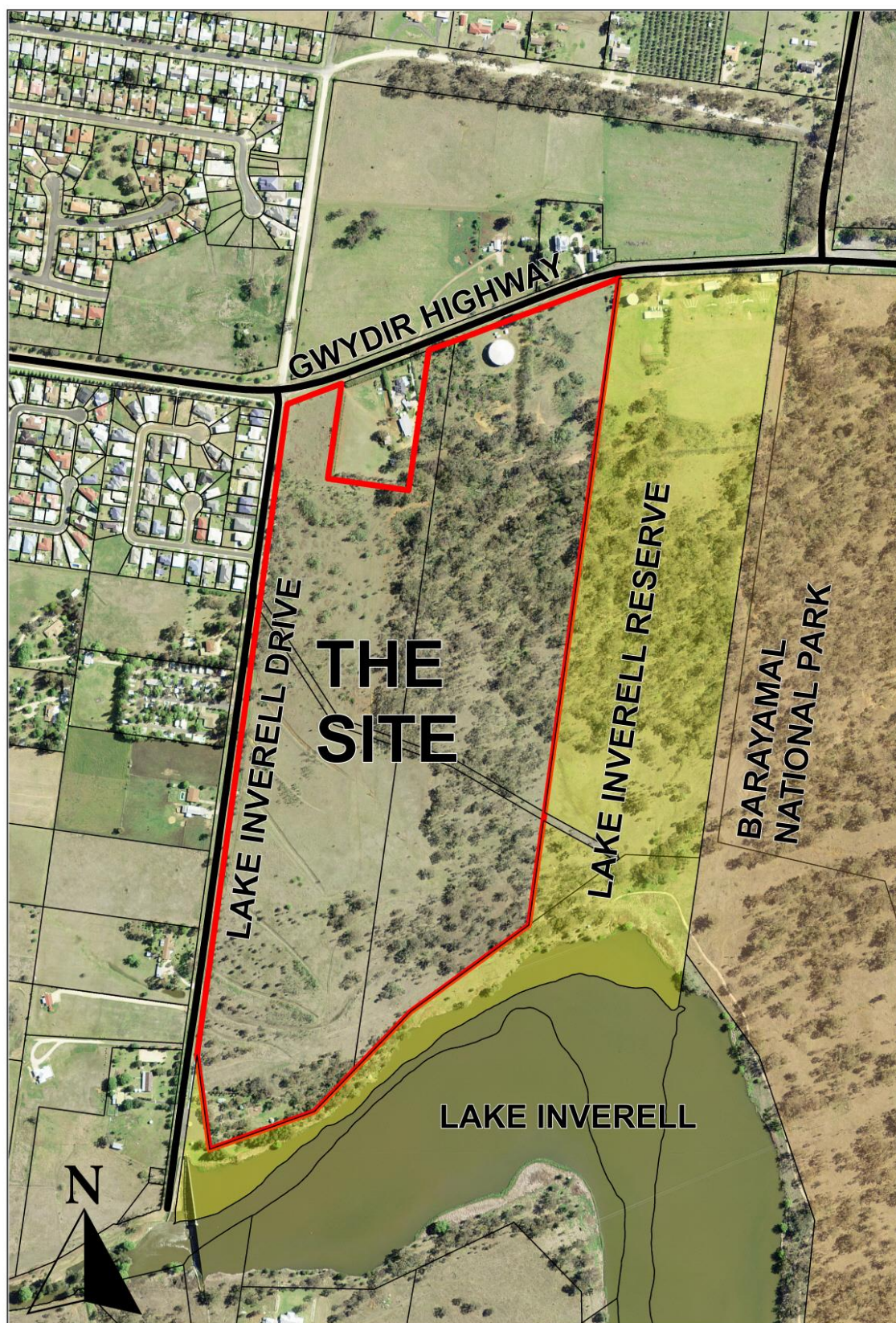


Figure 1 – Locality Plan and Adjoining Uses

## 2.3 Site Characteristics

The following is a summary of the physical characteristics and attributes of the site:

- The site generally slopes from north to south;
- The land drains naturally towards Lake Inverell to the south;
- There are a number of large drainage lines located on the site running in a south east direction from Lake Inverell Drive (**see Photo 8**);
- There is a mix of grassland and mature native vegetation species. Many of the larger trees have been planted in the past by volunteer groups and are not endemic to the area;
- Part of the site, in the north eastern corner is mapped as Bushfire Prone Land;
- The land has remained largely undeveloped and was acquired in 1938 for water supply purposes;
- The site is not located within a Heritage Conservation Zone and it does not contain any Heritage Items;
- The site is not subject to road widening or realignment;
- The site is unlikely to contain acid sulphate soils;
- Access to the site will be from Lake Inverell Drive which is six (6) metres wide and bitumen sealed. Lake Inverell Drive has a 50km/h speed limit. There is a number of traffic calming structures on Lake Inverell Drive (**see Photo 2**). Lake Inverell Drive intersects with the Gwydir Highway (**see Photo 1**);
- The proposed development will use the existing parking and facilities at Lake Inverell (**see Photos 3 & 7**) as well as provide additional car parking; and
- The previous undeveloped use of the site indicates a very low likelihood of contamination.

The following series of photographs shows the attributes of the site and locality.





**Photograph 1 – Lake Inverell Drive & Gwydir Highway intersection looking in a north-easterly direction.**



**Photograph 2 – Lake Inverell Drive. Note the traffic calming structure.**





**Photograph 3 – Existing informal and unmarked car parking area at Lake Inverell Reserve.**



**Photograph 4 – Lake Inverell Drive footpath and cycle way.**





**Photograph 5 – Area of proposed Off-Road Recreational Circuit.**



**Photograph 6 – Area of proposed Off-Road Recreational Circuit.**





**Photograph 7 – Lake Inverell Reserve Amenities (toilets and shelters).**



**Photograph 8 – Existing Drainage Line within the site running in a south east direction from Lake Inverell Drive.**





**Photograph 9 – Lake Inverell Reserve, Foreshore Area.**



**Photograph 10 – Existing Round-a-bout to be removed. The nearest dwelling (90 Lake Inverell Drive) is visible in the background.**



## THE PROPOSED DEVELOPMENT

### 3.1 Lake Inverell Reserve – Plan of Management

Inverell Shire Council has a Plan of Management for the Lake Inverell Reserve. This includes general administration details and management details with comprehensive operation guidelines for the reserve. Of particular relevance are the objectives (d) *To provide specific and strategically located recreational facilities for the enjoyment of the wider public*, (i) *To encourage the appropriate use, understanding and enjoyment of the area by the public*, and (k) *To provide access to specific locations and facilities within the reserve for all members of the community*.

These objectives clearly support the use of part of the reserve for the enjoyment of the cycling and broader community, as well as promote and to be commensurate with the other environmental preservation, protection and public enjoyment objectives of the plan.

### 3.2 Description of the Proposal

The Off-Road Recreational Circuit is intended to be an adaptable facility that can be used by multiple user groups for a broad range of activities. It is intended for daylight use only to respect the amenity of neighbouring dwellings and will consist of an asphalt surface of road grade quality six (6) metres wide with a circuit distance of approximately 1.5km.

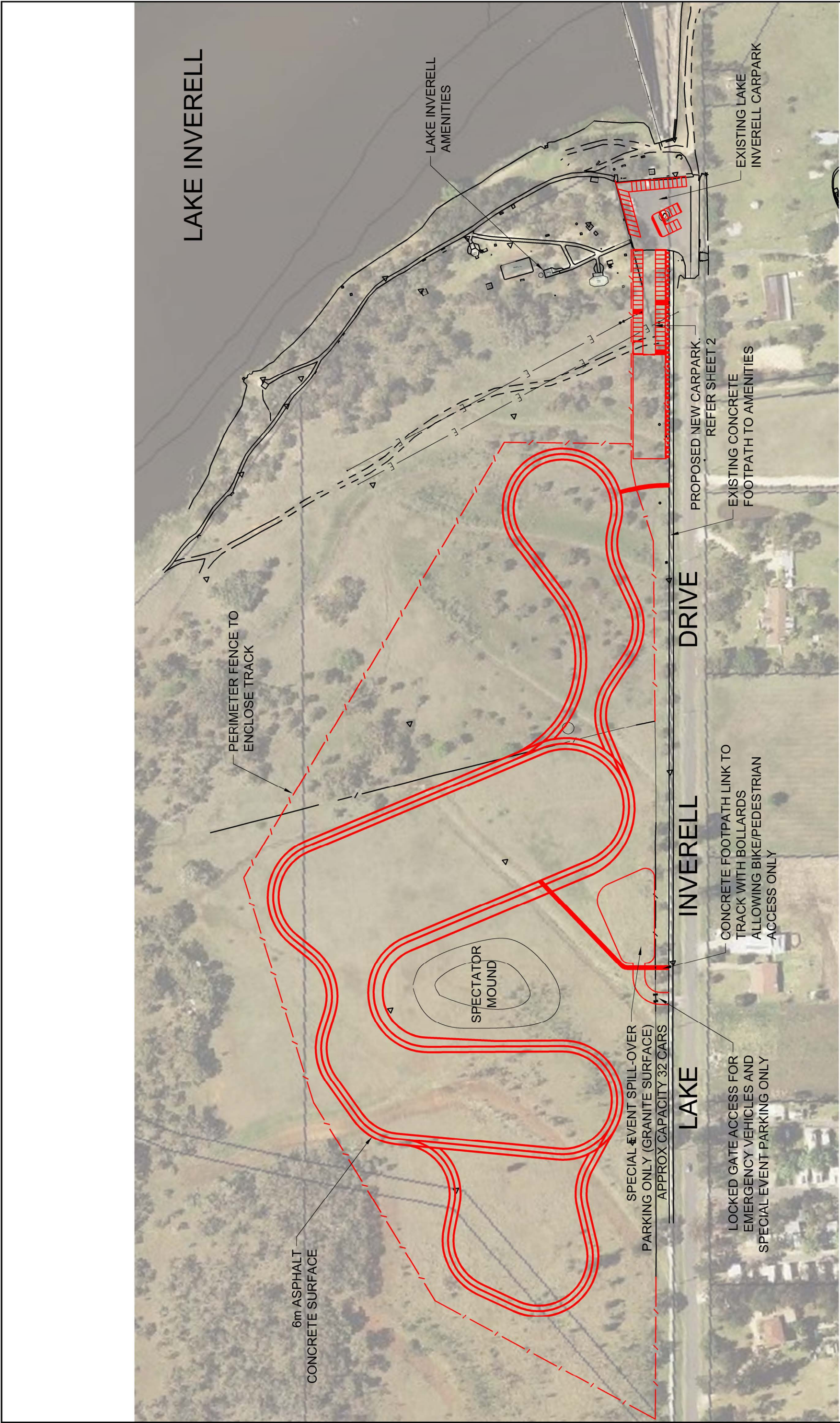
The proposed Off-Road Recreational Circuit will be an extension of Inverell's existing public footpath / cycle path network. It will provide an extension of this network in an environment protected from general traffic and will complement the adjoining Lake Inverell Reserve uses and facilities.

**Figure 2 – Site Plan** and **Figure 3 – Detailed Car Parking Plan** clearly depict the proposed development. A full sized copy of the plans is included as **Appendix A**.

The following is a summary of the key components of the development:

- Construction of a Circuit approximately 1.5 km with a six (6) metre wide asphalt surface of road grade quality including drainage structures;
- Extension and upgrade of existing parking at Lake Inverell Reserve. The proposed development will use and improve the existing car parking area and amenities at Lake Inverell;
- Special event over-flow parking in two locations (all weather granite surface). Access will be restricted through the use of fences, bollards and locked gates;
- Relocate existing information signs and remove round-a-bout;
- Footpaths linking the existing footpath in Lake Inverell Drive to the proposed Circuit;
- Grassed spectator mound. A raised area to provide a suitable vantage point for spectators to watch events or to supervise users;
- Fencing and bollards to restrict vehicle access into the Circuit and Reserve;
- Appropriate line-marking of the Circuit to assist with user safety;
- Landscaping; and
- Emergency Vehicle and Ambulance Access Point.





SCALES		DESIGN DETAILS		CONSTRUCTION DETAILS		AMENDMENTS			PASSED	APPROVED	INVERELL SHIRE COUNCIL			CHARGE NUMBER	SHEETS	NUMBER
		JOB No.	DATUM	PAVEMENT WIDTH -		No.	DATE	BY	DETAILS		PROPOSED LAKE INVERELL OFF ROAD RECREATIONAL CIRCUIT			PLAN No.	2	1
PROPOSED		SURVEY	S. DE GINIST	FORMATION WIDTH -		1										
		DESIGN	MBW	PAVEMENT DEPTH -		2										
SIGNED											SITE PLAN					
BY		DATE				3			DATE							
									MANAGER ENVIRONMENTAL ENGINEERING		MANAGER CIVIL ENGINEERING					
									DATE							





### 3.3 Design Considerations

When designing the Circuit, the following activities have been considered:

- Public walking and cycling;
- Children's wheeled recreational devices or wheeled toys – scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education;
- Fitness – Training circuits and obstacles, "Toughen Up" challenges, Triathlon, cycling and running events;
- Outdoor exhibitions – Caravan, camping, boating, fishing, 4WD, car shows, animal shows, small scale field days; and
- Outdoor recreation activities – radio controlled cars.

In addition to the above design influences, consideration has been given to neighbouring dwellings, site topography, vegetation and the environment. The location of the Circuit, ancillary development and intended uses has been carefully considered to ensure minimal impact on the amenity of the area.

### 3.4 Operational Details

The Circuit will be a publically open facility that operates during daylight hours. The Circuit will be predominantly used on a day-to-day basis by individuals undertaking active recreational pursuits such as walking and cycling.

Occasionally the Circuit will be closed to the general public for certain special events, such as a school cross country or a specialised cycling event. The Circuit and the Lake Inverell Reserve area will be closed to vehicular traffic, to maintain a safe environment for users.

### 3.5 Justification for the Proposed Development

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the proposed Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment that can be enjoyed by multiple user groups for a broad range of activities.

It is proposed that the Circuit will cater for the following activities:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, "Toughen Up" challenges, Triathlon, cycling and running events.

The proposed Off-Road Recreational Circuit will provide the town with an additional outdoor recreation facility that will be beneficial to the broader community and encourage further pursuits of a healthy, active lifestyle while enjoying the natural environment on offer in Inverell.

In determining a suitable location for an Off-Road Recreational Circuit for Inverell, the following broad criteria were established:

- Being a public facility, it should be located on Council managed public land;
- The site requires a large area to cater for a circuit of sufficient dimensions (length, width, etc.);
- It should not conflict with other recreation activities, e.g. athletics, cricket, etc.;
- Having a suitable soil type and topography for construction and long-term maintenance;
- It should be connected to the existing footpath / bicycle path network within Inverell; and
- To reduce costs and impacts, co-location with an existing facility (car park and amenities) is desired.

It is considered that the Lake Inverell Reserve is best able to meet the above criteria. No other alternative locations around Inverell were considered suitable for an Off-Road Recreational Circuit.

## PLANNING CONTROLS

### 4.1 State Environmental Planning Policy (Infrastructure) 2007

Pursuant to Clause 65(3) (a) (ii) of the *State Environmental Planning Policy (Infrastructure) 2007* recreation facilities (outdoor) are permitted without consent on a public reserve.

The proposed development does not require consent through the Development Application process; rather a Review of Environmental Factors (REF) is to be completed in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979*.

The REF ensures that whilst development consent is not required, the activity is still subject to an environmental assessment, taking into account to the fullest extent possible the matters affecting or likely to affect the environment. The REF will assist Council in determining whether the proposed activity should proceed and whether conditions (if any) should be imposed as mitigation measures.

### 4.2 Inverell Local Environmental Plan 2012

The subject land at Lake Inverell Reserve is zoned *E3 Environmental Management* under the *Inverell Local Environmental Plan 2012* (LEP). The objectives of the zone are:

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values; and
- To provide for a limited range of development that does not have an adverse effect on those values.

The proposed development is categorised as a “*recreation facility (outdoor)*” which is defined under the LEP as follows:

**“recreation facility (outdoor)”** means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).”

A “*recreation facility (outdoor)*” is permissible within the *E3 Environmental Management Zone* with the consent of Council. It is considered that the proposed development is consistent with the objectives of the zone.



## ENVIRONMENTAL ASSESSMENT – PART 5, EP&A ACT 1979

### 5.1 Introduction

In accordance with Section 5.5 (1) of the *EP&A Act 1979*, a determining authority in consideration of an activity shall examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.

In accordance with *Section 5.5 (3) of the EP&A Act 1979*, no wilderness areas within the meaning of the *Wilderness Act 1987* occur in the locality.

The purpose of this section of the report is to:

- Identify matters likely to affect the environment;
- Assess and discuss the potential impacts of these matters; and
- Where necessary, propose mitigation measures to ensure that the activity does not have a significant or adverse impact.

### 5.2 Traffic Management, Access and Parking

Access to the site is via Lake Inverell Drive which is bitumen sealed and six (6) metres wide. Lake Inverell Drive connects to the broader road network via the intersection with the Gwydir Highway. Lake Inverell Drive has a 50km/h speed limit and it also has a number of traffic calming structures.

Lake Inverell Drive has relatively low traffic counts for a two lane bitumen sealed road of minimum six (6) metre sealed width and generous shoulders, or parking lanes in areas where there is kerb and gutter. Traffic is predominantly light vehicles. Once the proposed development has been constructed traffic will remain as predominantly light traffic in keeping with the local precinct.

There is minimal information available on the estimated additional traffic likely to be generated by the proposed Circuit and proposed enhancement works for the Lake Inverell Reserve. Even if traffic counts were to double along Lake Inverell Drive over coming years Lake Inverell Drive would adequately handle the traffic.

There is a footpath and cycle way on the eastern side of Lake Inverell Drive which forms part of Inverell's broader footpath / cycle path network. By linking the proposed Circuit to the established pedestrian and cycle network it is likely to encourage walking and cycling to the site, as opposed to a reliance on cars.

Vehicular access into the proposed Circuit and Lake Inverell Reserve itself will be restricted by the construction of fencing and the use of bollards and locked gates. This will be a significant improvement to the current situation whereby vehicles have unobstructed access into the reserve.

The Site Plan and Detailed Car park Plan (**Figures 2 and 3**) show the location of the proposed car parking including the proposed upgrades to the existing Lake Inverell Reserve car park and the proposed special event spill-over parking, and will include:

- The removal of the existing round-a-bout and relocation of the information signs;
- Line marking of the existing bitumen car park area to provide for 28 car spaces and a bus parking space;
- Line marking and signage to improve traffic management within the car park;
- Construction of a new bitumen car parking area with 40 car spaces. The new bitumen car park will provide a pedestrian link to the existing footpath and will incorporate landscape screening. Access to the new bitumen car park will be in a north south direction via the existing car park.
- Special event spill-over parking will be provided in two locations; midway along Lake Inverell Drive and immediately north of the proposed new bitumen car park. These areas will be all-weather granite surface and will cater for approximately 72 cars in total. Parking in these areas will be restricted by fencing and locked gates and only used for large special events.

The traffic generation from the development and the potential impacts on Lake Inverell Drive is considered to be minimal as the use of the site will be predominantly by small groups and individuals not resulting in traffic impacts. The potential for impacts to arise would be during a large event, such as school cross country which would only be a few times a year and would be likely to use busses, thus reducing traffic.

It is considered that there will be adequate parking available for the proposed future activities at the site. The car parking layout, circulation and access have been designed to minimise congestion and conflict between vehicles, pedestrians and cyclists.

Based on the horizontal and vertical geometry, the intersection of Lake Inverell Drive and the Gwydir Highway has adequate capacity under the current and future levels of development with adequate sight distance in all directions.

### 5.3 Flora and Fauna

An REF under Part 5 of the *Environmental Planning and Assessment Act 1979* must assess whether the proposed activity is likely to significantly affect threatened species. This assessment is done in accordance with the *Biodiversity Conservation Act 2016* (BC Act). Additionally, matters of national environmental significance are also considered under the federal *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The site and the location of the proposed Circuit are generally described as being sparsely vegetated. The proposed Circuit will be primarily located in cleared areas of the site with grass cover the only vegetation to be disturbed.

An ecological consulting firm was engaged by Council to undertake an ecological assessment of the site. Field surveys were carried out in May 2018. The surveys did not detect any threatened flora or fauna species present within the footprint of the Circuit. Whilst no species were detected at the time of inspection, a search of ecological databases and records for the area indicated the potential for 17 threatened species, eight (8) threatened flora species and seven (7) Endangered Ecological Communities to be present in the area. Of these potentially occurring species, only Austral Toadflax (*Thesium australe*) was determined to have a high likelihood of occurrence. Austral Toadflax is listed as a threatened species at both a state and federal level.

To determine the potential impact on Austral Toadflax, a Five-Part Test of Significance was undertaken in accordance with *Biodiversity Conservation Act 2016*. This test of significance determined that given the scale of the proposed works, the greater extent of habitat available in the



locality and proposed mitigation measures, the proposed Off-Road Recreational Circuit is unlikely to result in a significant impact on the local occurrence of Austral Toadflax. A further Species Impact Statement is not required for this project. A threatened species approval from state or federal environment Ministers is also not required for this activity.

A copy of the ecological assessment has been included as **Appendix B**. The proposed ecological mitigation measures have also been included in the mitigation measures section (Section 7) of this report.

## 5.4 Cultural Heritage

As part of Council's investigation phase of the project a Due Diligence survey was conducted by members of the Anaiwan Local Aboriginal Land Council (LALC) to determine the presence of any items of Aboriginal Cultural Heritage Significance at the site. The survey identified the presence of eight (8) stone artefacts and it was recommended that Inverell Shire Council apply for an Aboriginal Heritage Impact Permit (AHIP) for the removal of the stone artefacts.

To facilitate the AHIP an Aboriginal Cultural Heritage Assessment is required pursuant to Section 90A of the *National Parks and Wildlife Act 1974*. Inverell Shire Council engaged Artefact and Aspect to undertake the necessary Aboriginal Cultural Heritage Assessment.

A copy of the Aboriginal Cultural Heritage Assessment is included as **Appendix C**. The report outlines the assessment undertaken and builds on and documents the previous Due Diligence Assessment. The report recommends that the artefacts found within the development site be removed to a suitable site away from the development area to a site of Anaiwan LALC's choosing and recorded.

## 5.5 Adjoining Land – Barayamal National Park and Shooting Ranges

Two non-residential land uses adjoin the Lake Inverell Reserve, these being:

- Barayamal National Park; and
- Shooting Ranges (Clay Target and Small-bore Clubs).

Consideration should be given to potential conflict and/or impacts on these adjoining uses.

### 5.5.1 Barayamal National Park

The Off-Road Recreational Circuit is not considered to have any direct impacts on the National Park, being setback over 350 metres from the western edge of the National Park.

It is proposed to fully fence the Off-Road Recreational Circuit and the Lake Inverell car park, which will prevent vehicles, cyclists and pedestrians from directly accessing the National Park from the Circuit.

Potential indirect impacts on the National Park are considered to be the spread of weeds and/or rubbish. In this regard, weed management and rubbish collection operations will be undertaken, which will mitigate these potential impacts.

### 5.5.2 Shooting Ranges

The Inverell RSM Clay Target Club and Inverell RSM Small-bore Rifle Club are both located to the north of the Off-Road Recreational Circuit.

The primary matter for consideration is the 'Range Danger Area' associated with each club. A Range Danger Area is an exclusion area, down range of targets, which provides a buffer in case of misfiring, human error, ricochets, etc. No buildings or people should be within a Range Danger Area.

During the design of the Circuit, Council contacted the Range Inspector from the NSW Police Firearms Registry. The Range Inspector has provided a map showing the Range Danger Areas associated with the Clay Target and Small-bore shooting ranges.

This map is included as **Appendix D** and clearly demonstrates that the Circuit is not impacted by the Range Danger Areas.

## 5.6 Noise

It is envisaged that once operational the predominant users of the Off-Road Recreational Circuit will be cyclists and walkers, which will not generate any significant noise impacts on surrounding properties. It is proposed that the Circuit will be used during day light hours only and therefore no Circuit lighting will be installed.

Possible other noise sources could include announcements over a public address system. Council will not be installing a public address system for the Circuit.

Once operational there will be some increase in traffic using Lake Inverell Drive, and consequently, there will be some additional traffic noise generated. The traffic will predominantly be light (cars), not heavy (trucks). Lake Inverell is within the residential footprint of Inverell and the noise generated by light traffic is commensurate with residential land uses. Furthermore, traffic will be generally limited to day periods as the Lake Inverell Reserve is not suitable for night activities (no lighting).

During a larger event such as a school cross-country or a specialised cycling event there is potential for increased noise generated from the site. These events however will be held during the day and will occur infrequently.

During construction of the Circuit there is a greater likelihood of noise impacts from the site and along Lake Inverell Drive from heavy vehicles and machinery. Suitable mitigation measures such as limiting construction hours will be implemented to minimise construction noise impacts on surrounding properties. In addition the construction timeframe is likely to be in the order of 14 weeks only.

## 5.7 Lighting

Both the Off-Road Recreational Circuit and the activities at broader Lake Inverell Reserve are tailored towards daylight recreation only. No lighting is proposed for the Circuit.

During dawn and dusk periods, there is potential for vehicles to use headlights, which may impact dwellings near the Lake Inverell Reserve car park. Landscape screening will be undertaken between the car park and Lake Inverell Drive, which will help to mitigate these potential impacts.

There is some chance of bikes with lights using the Circuit at night. It is considered that this would occur infrequently and in small numbers with the possible impacts on adjoining residences negligible.

## 5.8 Stormwater Management

Stormwater impacts resulting from the proposed development are considered to be unlikely. Lake Inverell Drive has appropriate existing stormwater infrastructure in place. Stormwater from Lake Inverell Drive generally flows in open grass swales and discharges in to a series of larger open drains on the development site which flow in a south east direction. The proposed development will not change this situation.

## 5.8 Visual Impacts and Landscaping

The development will not be visually obtrusive or prominent in the landscape. The Circuit will follow the natural slope of the land. With the exception of the Circuit footprint, existing vegetation will be retained.

It is proposed to undertake landscaping around the Lake Inverell Reserve car park. This will soften the visual impact of the large hard stand area when viewed from Lake Inverell Drive and provide a visual buffer for nearby residences.

It is not proposed to undertake any significant additional landscaping around the Off-Road Recreational Circuit. This will ensure passive surveillance of the Circuit from Lake Inverell Drive is maintained, whilst also allowing users to enjoy broader views of the Lake Inverell area.

## 5.9 Earthworks

Minimal earthworks are required for the construction of the Off-Road Recreational Circuit and mitigation measures will be employed during construction, including erosion control, monitoring and stabilisation. The specific measures are identified in **Section 7 – Mitigation Measures**.

## 5.10 Utility Services

The Off-Road Recreational Circuit does not require the provision of any additional utility services.

The existing amenities at Lake Inverell will be used for the development and concrete/asphalt paths will be constructed to provide a path of travel from the Circuit to these amenities. The Lake Inverell amenities are serviced by an aerated waste water treatment system. The amenities and waste water system are considered to have sufficient capacity for the proposed activity.

It is noted that should there be an increased demand for additional amenities in the future, utility services are available to the site, including water and electricity. Reticulated sewer is also available in the northern half of Lake Inverell Drive, which can be investigated at that time.

An electricity easement is located between the proposed Circuit and Lake Inverell. The Off-Road Recreational Circuit is not considered to adversely impact electricity infrastructure and the easement will be accessible to authorised personnel through a locked gate via the new Lake Inverell Reserve car park.

### 5.11 Social and Economic Impact

The proposal will have a positive social and economic impact by providing an additional outdoor recreation opportunity for community, school and tourist events resulting in wider long-term economic, health and social benefits.

It is also reported that outdoor recreation spaces and sports activities attract investment, support local businesses and provide spaces for major events which attract tourists and visitors and boosts local economies. Ensuring the Inverell Shire's outdoor recreation network is preserved and enhanced for current and future residents is an important role of Council.

### 5.12 Bushfire

The site is mapped as bushfire prone; however, the location of the Off-Road Recreational Circuit is clear of these areas. The Plan of Management for Lake Inverell Reserve contains specific operational matters relating to fire. These include fuel reduction, control and a fire plan which will reduce the likelihood of impacts from any potential bushfire events.

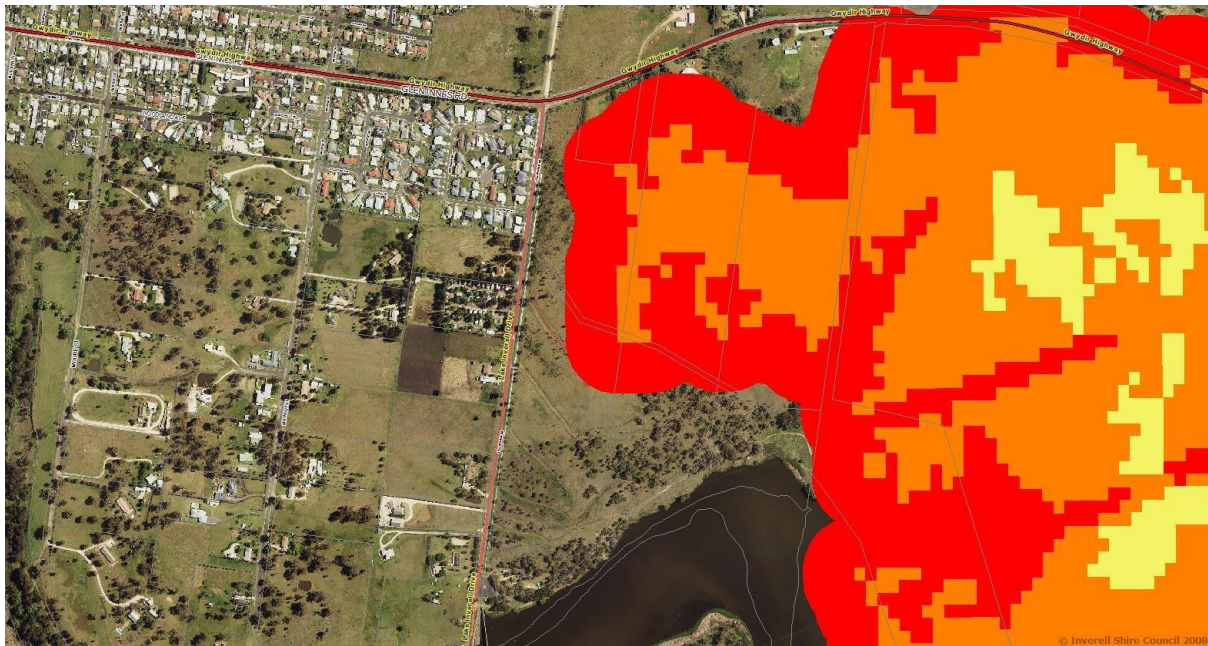


Figure 4 - Extract of Bushfire Prone Land Map

### 5.13 Air Quality

Once constructed the Off-Road Recreational Circuit will have an asphalt concrete surface and will not generate dust and is unlikely to have any other air quality impacts.

The special event spill-over parking areas will be granite and will have the potential to generate dust impacts during an event. Depending on the weather conditions this potential impact can be managed with the use of a water cart prior to and after an event.

The greatest potential for air quality impacts will be during construction. The construction period will be approximately 14 weeks and Council will employ its standard mitigation measures to minimise air quality impacts on nearby residences, including use of a water cart, covering stockpiles and covering loads.

## 5.14 Waste

Garbage and recycling disposal facilities are already located at Lake Inverell Reserve and can be used by day-to-day users of the Circuit. For an isolated larger event, the event manager(s), with the assistance of Council, would be responsible for ensuring adequate waste handling and disposal procedures are in place.

All waste during construction will be disposed at the Inverell landfill, with the exclusion of any felled hollow bearing trees, which will remain on-site for animal habitat.

## 5.15 Summary of Impacts

The primary impacts associated with the activity are considered to be traffic, access and parking; flora and fauna; and cultural heritage. As part of the Review of Environmental Factors, specialist staff and consultants were commissioned to assess these factors. It has been determined that:

- There will be adequate parking available for the proposed future activities at the site. The car parking layout, circulation and access will be designed to minimise congestion and conflict between vehicles, pedestrians and cyclists;
- Based on the horizontal and vertical geometry, the intersection of Lake Inverell Drive and the Gwydir Highway has adequate capacity under the current and future levels of development with adequate sight distance in all directions;
- The activity will not have a significant impact on threatened species; and
- Subject to obtaining an Aboriginal Heritage Impact Permit, the activity will not have a significant impact on cultural heritage.

In relation to other impacts such as noise and lighting, the predominant use of the Off-Road Recreational Circuit will be by cyclists and pedestrians during daylight hours. This typical usage is considered to be low impact and not adversely impact surrounding residential properties. During a larger event, there is potential for additional impacts such as noise generated from the site. However, such an event will be held during the day, will occur infrequently and under a controlled environment, which will minimise impacts on surrounding land uses.

The potential impacts associated with the Circuit have been identified and assessed throughout this section of the report. It is considered that the Circuit will not have a significant adverse impact on the environment, adjoining land uses or the broader residential areas.

To minimise impacts during the construction Off-Road Recreational Circuit, mitigation measures have been proposed in **Section 7**. These mitigation measures also include the recommendations from the ecology and aboriginal heritage consultants.

## COMMUNITY CONSULTATION

### 6.1 Introduction

Community consultation was undertaken as part of the process of preparing the Review of Environmental Factors for the Off-Road Recreational Circuit. The community consultation period extended from 11 September 2018 to 16 October 2018.

The consultation involved:

- Advertising within the Council Notices section of the Inverell Times on:
  - Friday 14 September 2018;
  - Tuesday 25 September 2018; and
  - Friday 28 September 2018;
- Letters posted to landowners along Lake Inverell Drive; and
- Online exposure, including Facebook posts, dedicated web page and an on-line submission function.

As a result of the consultation two (2) on-line submissions were received as well as two (2) written submissions. There was also an article published in the Inverell Times on 5 October 2018.

**Appendix E** contains Council's notification package as well as the submissions and the Inverell Times article.

### 6.2 Discussion - Key Issues Raised in Submissions

#### Impacts on Koalas

- Concerns were raised about a sighted Koala population and other native fauna in the area.

#### Council's Comments

Council engaged a qualified consultant to undertake a detailed ecological assessment of the proposal. The assessment concluded that site represents a highly modified and degraded habitat and with a number of amelioration measures the potential impacts on both flora and fauna can be minimised.

#### Pedestrian Safety

- Vehicles entering and exiting the proposed car parks over the existing footpath.
- Acknowledges that the car parks would only be used a few times a year and that the onus would be on event coordinators to manage the risk.

#### Comments – Manager Environmental Engineering

There are two car parking areas proposed for the Circuit being the existing Lake Inverell car park (which will be expanded) and a new special events over-flow parking area midway along Lake Inverell Drive. It is not uncommon for a footpath / cycleway to pass over a property access, including access to a car park.



The new special events parking area midway along Lake Inverell Drive will be special event over-flow parking only, with vehicle access denied at all other times, except for emergency vehicles. If the car parking is needed during a special event the access over the footpath / cycle way will be controlled by the event coordinator to minimise potential vehicle / pedestrian conflict.

The upgraded and extended Lake Inverell car park has been specifically designed to minimise conflict between cars and pedestrians, with all vehicles entering and exiting the existing car park and extended car park via an existing traffic calming device at the end of Lake Inverell Drive. The extended car park has a pedestrian link to the existing footpath along Lake Inverell Drive. There will also be signs and line marking to better control traffic flow in the car park.

#### Traffic Management and Congestion

- Concerns about increased traffic flow along Lake Inverell Drive during peak periods (weekends and holidays).
- The existing car park is at capacity on weekends.
- The informal nature of the existing car park leads to congestion and “near misses”.

#### Comments – Manager Environmental Engineering

Lake Inverell Drive has relatively low traffic counts for a two lane bitumen sealed road of minimum six (6) metre sealed width and generous shoulders, or parking lanes in areas where there is kerb and gutter. Traffic is predominantly light vehicles. Once the proposed development has been constructed traffic will remain as predominantly light traffic in keeping with the local precinct.

The average daily traffic count (ADT) immediately south of Kingfisher Drive is 445 vehicles per day ranging from 425 on weekdays to 485 on weekends. This provides background levels on traffic volumes associated with the current level of development and activities along Lake Inverell Drive which show a 14 percentage increase in traffic of a weekend. No traffic data is available during school holidays however this is not expected to change significantly.

There is no information available on the additional traffic likely to be generated by the proposed Circuit and proposed enhancement works for the Lake Inverell. Even if traffic counts were to double along Lake Inverell Drive over coming years Lake Inverell Drive would adequately handle the traffic.

There will be two car parks proposed for the proposed development. The existing Lake Inverell Reserve car park which will be upgraded and expanded and a new special events parking off Lake Inverell Drive midway along the frontage to the Circuit. The existing sealed Lake Inverell car park will be reconfigured and delineated with pavement markings to improve traffic flow and maximise parking spaces for 28 cars and one (1) bus. In addition the car park will be extended to the north, creating an additional 40 sealed car parking spaces, totalling 68 sealed car parking spaces for general every day use and to be shared with patrons of the Lake Inverell Reserve. It is proposed that an additional 34 gravel car parking spaces will be available for special event spill-over parking only during special events. This will provide a total of 102 car parking spaces at the Lake Inverell Reserve car park.

In addition the special events spill-over car park off Lake Inverell Drive will provide approximately 32 car parking spaces. The car park will have controlled access and be of a gravel surface standard. The car park will have a sealed access off Lake Inverell Drive and have good sight distance along Lake Inverell Drive.

It is considered there will be adequate parking available for the proposed future activities at the site. The car parking layout, circulation and access will be designed to minimise congestion and conflict between vehicles, pedestrians and cyclists.

#### Gwydir Highway Intersection

- The Lake Inverell Drive and Gwydir Highway has witnessed some major traffic accidents.
- The proposed development will only heighten the risk for all road users.

#### Comments – Manager Environmental Engineering

A review of crash and casualty statistics on the *NSW Centre for Road Safety web-site* between 2013 and 2017 (5 years) indicates only 1 recorded accident at the Lake Inverell Drive and Gwydir Highway intersection on 20 November 2017. The degree of crash was rated as *moderate injury* (1 person) with the accident occurring in daylight hours.

Based on the horizontal and vertical geometry, it is considered that the intersection of Lake Inverell Drive and the Gwydir Highway has adequate capacity under the current and future levels of development with adequate sight distance in all directions.

#### Unauthorised Access to car parks

- The area is already a regular haunt for larrikin behaviour and an unlit car park will lend itself to undesirable activity.
- The installation of bollards would not eliminate or reduce such anti-social behaviour.

#### Comments – Manager Environmental Engineering

The proposed new fencing and restricted access arrangements for the proposed development including bollards and locked gates will prevent vehicular access to both sites. This will be a significant improvement to the current situation whereby vehicles have unobstructed access into Lake Inverell Reserve.

#### Location of Car parks

- The proposed car parks are located opposite semi-rural residences.
- Night time usage cannot be excluded.
- The mass exodus of vehicles after a major event would impact on residences.
- Impact of headlights from cars at night.
- Suggestion to design for car parks and a new amenity building to be centrally located and have access off the Gwydir highway.

#### Comments – Manager Environmental Engineering

The upgraded and expanded Lake Inverell Reserve car park has been designed so that all vehicles enter and leave by the existing entrance in a north south direction, which will minimise the impact on nearby residents to the west of the site.

While night time use of the Circuit cannot be explicitly excluded, the primary use will be during daylight hours. Circuit lighting is not proposed.

There is unlikely to be a mass exodus of vehicles from a major event. The competitors and spectators departure times are expected to vary across the duration of events throughout the day.



The upgraded and expanded Lake Inverell Reserve car park fronting Lake Inverell Drive will be landscaped and fenced to provide adequate screening. This will reduce the impact of an instance where a vehicle happened to use the car park of a night.

It is not proposed or desirable to have the Circuit's access off the Gwydir Highway when Lake Inverell Drive provides a suitable and safe access to the proposed development. The Circuit will link in with the existing footpath / cycle path network along Lake Inverell Drive providing connectivity and amenity for users.

The NSW Roads and Maritime Services would be unlikely to support a new access off the Gwydir Highway.

## MITIGATION MEASURES

### 7.1 Introduction

Based on the Environmental Assessment and consideration of impacts in Section 5 of this report, the purpose of this section is to provide a consolidated list of a mitigation measures proposed to be implemented to minimise potential impacts associated with the construction of the Off-Road Recreational Circuit.

It is proposed that this list will be extracted and included as conditions of an Activity Approval for the Off-Road Recreational Circuit.

### 7.2 Measures

#### Prior to Commencement of Works

1. Prior to commencement of any works, an Aboriginal Heritage Impact Permit (AHIP) is to be obtained from the NSW Office of Environment and Heritage. Any pre-construction/commencement conditions of the AHIP are to be satisfied.

#### General

2. Access, machinery/vehicle parking, construction compounds, stockpile sites and storage of materials must be located within the disturbed area or other hard pan areas previously used for this purpose.
3. Where the activity involves the disturbance of any existing survey monuments, those monuments affected will need to be relocated by a Surveyor registered under the Surveyors Act. A plan showing the relocated marks will then be required to be lodged as a matter of public record at the Lands Titles Office.

#### Erosion and Sedimentation

4. The activity is to involve no greater disturbance to the ground/soil than necessary.
5. Erosion and sediment control measures are to be implemented and maintained in accordance with the Landcom/Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book).
6. Erosion and sedimentation controls are to be checked and maintained on a regular basis, including clearing of sediment from behind barriers.
7. Erosion and sediment control measures are not to be removed until the works are complete and areas are stabilised.

#### Water Quality

8. The activity is not to result in a significant increase in stormwater run-off.
9. There is to be no release of dirty water into drainage lines and/or waterways.

10. Visual monitoring of local water quality (i.e. turbidity, hydrocarbon spills/slicks) is to be undertaken on a regular basis to identify any potential spills or deficient erosion and sediment controls.
11. Water quality control measures are to be used to prevent any materials (e.g. concrete, grout, sediment etc.) entering drain inlets or waterways.

#### Air Quality

12. Measures (including watering or covering exposed areas) are to be used to minimise or prevent air pollution and dust.
13. Works (including the spraying of paint and other materials) are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely.
14. Vehicles transporting waste or other materials that may produce odours or dust are to be covered during transportation.
15. Stockpiles or areas that may generate dust are to be managed to suppress dust emissions.

#### Noise and Vibration

16. Works to be carried out during normal work hours (i.e. 7.30 am to 4.30 pm Monday to Friday). Any work that is required to be performed outside normal work hours is to minimise noise impacts.
17. Measures, including limited distance that rollers can come to adjacent buildings and/or using non vibrating rollers, are to be used to minimise or prevent vibration impacts.

#### Flora

18. Clearing of woodland is to be kept to the minimum required for the purposes of the proposed Circuit;
19. No hollow bearing trees are to be removed.
20. Protection fencing to be installed to delineate clearing boundaries, including hard stand/turning bays and/or compound sites, and establish an environmental no-go zone thus avoiding the unnecessary clearing of woodland trees.
21. Equipment is to be washed-down before first entering the site so as to minimise the potential for the importation of seed from invasive species particular priority weeds identified in the *Northern Tablelands Regional Strategic Weed Management Plan 2017 – 2022* under the *Biosecurity Act 2015*.
22. Spoils from excavation and clearing be retained on site where possible and used to rehabilitate the disturbance zone immediately upon the completion of upgrade works (these spoils would contain natural seed bank to aid in site regeneration).
23. Rehabilitate surfaces following the completion of construction activities and removal of compound and/or stockpiles. This to include re-seeding with endemic woodland species, particularly groundcovers including grasses, to help reduce the potential for weed incursion.

#### Fauna

24. Prior to felling, all trees must be inspected by a suitably licensed and experienced ecologist to identify the presence of any birds' nests or possum dreys.
25. If a koala is found to be occupying a tree at the site, an exclusion zone is to be established (minimum of 50m) in which works are not to proceed until the individual relocates of its own volition.

26. Clearing of trees wherever possible should be avoided during spring and winter to avoid the disturbance, injury and death of breeding fauna (birds and arboreal mammals) and hibernating fauna (microbats and gliders).
27. Felled trees should be used to supplement the habitat values within the area. To avoid creating a feral pest harbour (foxes were observed on site) this timber must not be stacked or windrowed but must be laid individually on the ground across the area.
28. Any native fauna species discovered inhabiting trees to be cleared and/or disturbed by clearing must be captured and removed by persons licensed under the NPW Act 1974.
29. Should any animal be injured by the works, WIRES or a local vet should be contacted.

#### Traffic

30. Where possible, current traffic movements and property accesses are to be maintained during the works. Any disturbance is to be minimised to prevent unnecessary traffic delays.

#### Non-Aboriginal Heritage

31. Should any relics be uncovered during excavation on site, works must cease in that area and the Heritage Officer is immediately notified in accordance with Section 146 of the *Heritage Act 1977*.
32. If an existing heritage item is on site or in the near vicinity of the works, the item is to be protected to prevent any damage or disturbance.

#### Waste Management

33. All waste generated by the Activity is to be disposed of at a suitably licensed landfill or recycling centre.
34. Waste is not to be burnt on site.
35. Waste material, other than vegetation and tree mulch, is not to be left on site once the works have been completed. Any vegetation (branches, etc.) are not to be stacked.
36. Working areas are to be maintained and kept free of rubbish.

#### Hazard Material

37. All fuels, chemicals and liquids are to be stored in a suitably bunded area located away from drainage lines or waterways.
38. Refuelling of plant and equipment is to occur in impervious areas located away from drainage lines or waterways.
39. Cleaning of spray bars (or equivalent equipment) is to occur in suitable areas (e.g. not table drains) and not cause water pollution.
40. Vehicle and machinery wash down is to occur in a designated bunded area.

#### Community Consultation

41. Complaints received are to be recorded and attended to promptly.
42. Existing access for nearby and adjoining properties is to be maintained at all times during the works unless otherwise agreed to by the affected property owner.

## SUMMARY

The proposed development is for the construction of the Inverell Off-Road Recreational Circuit on Lot 10 DP 252287 and Lots 1 and 2 DP 1101540, having an area of approximately 19 hectares within the Lake Inverell Reserve on the eastern outskirts of Inverell.

The land is zoned E3 Environmental Management pursuant to the *Inverell Local Environmental Plan 2012*. The proposal is defined as a “*recreation facility (outdoor)*”. The Circuit is consistent with the objectives of the *Inverell Local Environmental Plan 2012* and the objectives of the E3 Environmental Management zone.

The proposal is subject to a Review of Environmental Factors (REF) in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979*.

Development issues have been assessed in the context of:

- Traffic management, access and parking;
- Flora and fauna;
- Cultural heritage;
- Adjoining lands;
- Noise and lighting;
- Storm water management;
- Visual impacts and landscaping;
- Earthworks;
- Utility services;
- Social and economic impacts;
- Bushfire and air quality; and
- Waste.

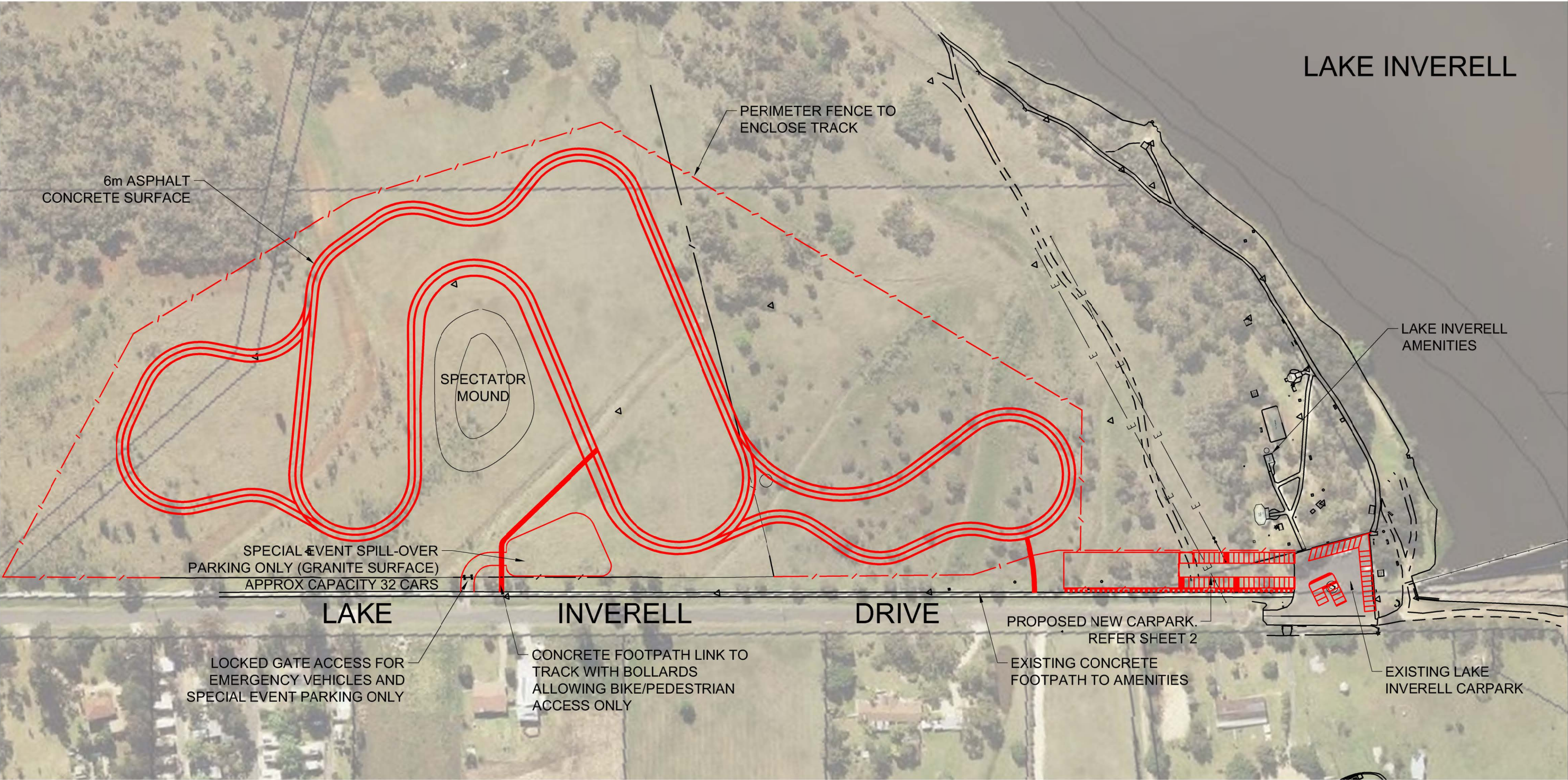
The detailed discussions in the report demonstrate that the proposed development has been designed appropriately; that the environmental impacts can be adequately mitigated and the site is suitable for the proposed development.

The proposal to develop an Off-Road Recreational Circuit will provide the Inverell with an additional outdoor recreation facility that will be financially beneficial to the broader community and encourage further pursuits of a healthy, active lifestyle while enjoying the natural environment on offer in Inverell.

Based on the assessment and key findings contained within this REF, it is concluded that an Environmental Impact Statement is not required for this activity (**Refer Appendix F – Is an EIS required**).

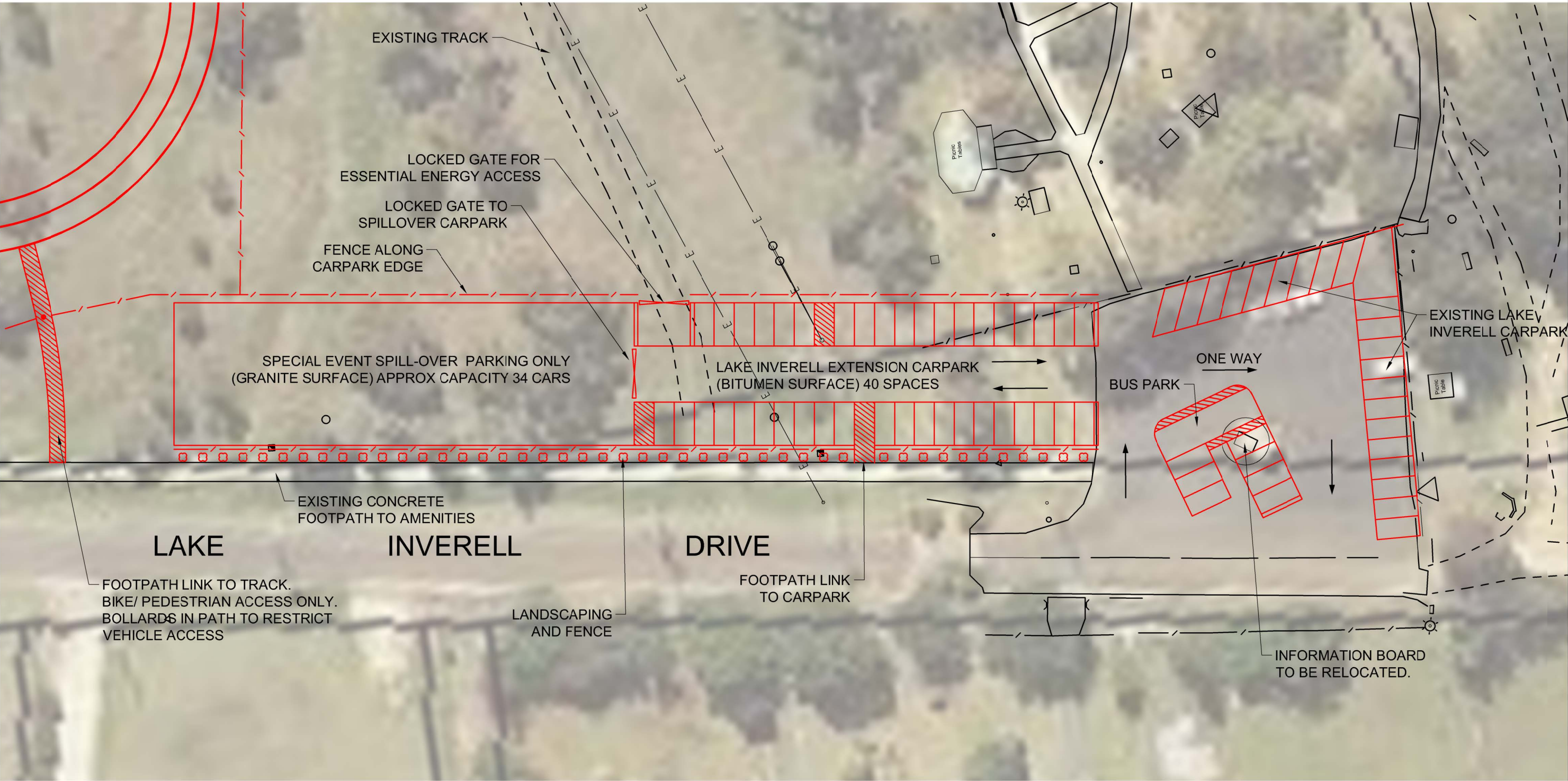
## **APPENDIX A – Site Plan & Car Parking Plan**





SCALES		DESIGN DETAILS			CONSTRUCTION DETAILS		AMENDMENTS				PASSED	APPROVED	INVERELL SHIRE COUNCIL			CHARGE NUMBER	SHEETS	NUMBER	
		JOB No.	DATUM		PAVEMENT WIDTH -		No.	DATE	BY	DETAILS		MANAGER ENVIRONMENTAL ENGINEERING	MANAGER CIVIL ENGINEERING	PROPOSED LAKE INVERELL OFF ROAD RECREATIONAL CIRCUIT SITE PLAN				2	1
PROPOSED		SURVEY	S. DE GINST	4/18	FORMATION WIDTH -		1												
SIGNED .....		DESIGN	MBM	12/18	PAVEMENT DEPTH -		2												
BY .....	DATE .....	CHECKED					3					DATE.....	DATE.....				PLAN No.		





SCALES		DESIGN DETAILS			CONSTRUCTION DETAILS		AMENDMENTS				PASSED	APPROVED	INVERELL SHIRE COUNCIL			CHARGE NUMBER	SHEETS	NUMBER
		JOB No.	DATUM		PAVEMENT WIDTH -		No.	DATE	BY	DETAILS		MANAGER ENVIRONMENTAL ENGINEERING	MANAGER CIVIL ENGINEERING	PROPOSED LAKE INVERELL OFF ROAD RECREATIONAL CIRCUIT DETAILED CARPARK PLAN			2	2
PROPOSED		SURVEY	S. DE GINST	4/18	FORMATION WIDTH -		1											
SIGNED .....		DESIGN	MBM	12/18	PAVEMENT DEPTH -		2											
BY .....	DATE .....	CHECKED					3					DATE.....	DATE.....	PLAN No.				



## **APPENDIX B – Flora and Fauna Assessment**

# Ecological Assessment

## Off-road Recreational Circuit, Inverell

**Prepared for:** Inverell Shire Council

**Document Reference:** RC01118

**Date:** June 2018

**Report Author:**



**Jakub Juszcak**

Ecologist, Reconeco Pty Ltd



This report has been prepared for the use of the stated client and for the specific purpose described in the introduction and is not to be used for any other purpose or by any other person or business entity. Reconeco accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this report in contravention of the terms of this disclaimer.

Due consideration has been given to site conditions and to appropriate legislation and documentation available at the time of preparation of the report. As these elements are liable to change over time, the report is to be considered current at the time of preparation only.

The report relies on information supplied by the client and on findings obtained using accepted survey and assessment methodologies. The specific survey methodology utilised is described in the relevant section of the report.

While due care was taken during field survey and subsequent report preparation, Reconeco accepts no responsibility for any omissions that may have occurred due to the nature of the survey methodology.

**Title:**

Ecological assessment report Inverell Off Road  
Recreational Circuit

**Approval and authorisation**

Accepted on behalf of Inverell  
Shire Council by:

Signed:

Dates:

Document Status	Appendices included	Format	Date Sent to Client	Reviewed By	Date Comments Received
Draft	Yes	pdf	14/06/2018	AA	19/06/2018
Rev1	Yes	pdf	21/06/2018		

## TABLE OF CONTENTS

<b>1.</b>	<b>INTRODUCTION AND BACKGROUND .....</b>	<b>3</b>
1.1.	<i>Introduction .....</i>	3
1.2.	<i>Project Location and Proposal .....</i>	3
1.3.	<i>Site Description .....</i>	3
<b>2.</b>	<b>METHODOLOGY .....</b>	<b>4</b>
2.1.	<i>Desktop Review .....</i>	4
2.2.	<i>Field Survey .....</i>	4
<b>3.</b>	<b>RESULTS .....</b>	<b>6</b>
3.1.	<i>Results of Desktop Assessment .....</i>	6
3.2.	<i>Results of Field Survey .....</i>	6
<b>4.</b>	<b>STATUTORY REQUIREMENTS .....</b>	<b>11</b>
4.1.	<i>Biodiversity Conservation Act 2016 .....</i>	11
4.2.	<i>Environmental Protection and Biodiversity Conservation Act 1999 .....</i>	11
4.3.	<i>State Environmental Planning Policy No. 44 – Koala Habitat Protection .....</i>	12
4.4.	<i>NSW Fisheries Management Act 1994 .....</i>	13
<b>5.</b>	<b>IMPACTS AND AMELIORATION.....</b>	<b>14</b>
5.1.	<i>Impacts .....</i>	14
5.2.	<i>Amelioration Measures .....</i>	14
<b>6.</b>	<b>CONCLUSION .....</b>	<b>16</b>
<b>7.</b>	<b>BIBLIOGRAPHY .....</b>	<b>17</b>
<b>8.</b>	<b>APPENDICES .....</b>	<b>18</b>
	<i>Appendix A – Photographs of the subject site .....</i>	19
	<i>Appendix B – Construction diagrams/concept plan .....</i>	20
	<i>Appendix C – Database search results .....</i>	21
	<i>Appendix D – Threatened Species Likelihood of Occurrence.....</i>	22
	<i>Appendix E – Flora and Fauna species recorded at the subject site .....</i>	31
	<i>Appendix F – 5-part tests (BC Act listed species).....</i>	33
	<i>Appendix G – Assessments of Significant Impact (EPBC Act listed species) .....</i>	37

# 1. Introduction and Background

---

## 1.1. Introduction

RECONECO Pty Ltd was commissioned by Inverell Shire council to prepare an ecological assessment to inform a Review of Environmental Factors (REF) being prepared by Inverell Council to look at the impact of constructing a sealed off-road recreational circuit and associated infrastructure on council owned land adjacent to Lake Inverell, Inverell, northern NSW. This report presents the results of the ecological assessment and is considered to be an adjunct to the REF to be presented as an appendix to the REF.

The aim of this report is to describe the flora and fauna of the subject site and associated possible ecological constraints as they relate particularly to the occurrence and/or possible occurrence of listed threatened species, populations and/or ecological communities known to occur in the greater locality. Further to this, the report considers the potential impact of the proposal on threatened species, populations and/or Endangered Ecological Communities listed under both state and federal legislation.

## 1.2. Project Location and Proposal

The project area lies on the North West Slopes of NSW within the Inverell Local Government Area (LGA). The project is located on Lake Inverell Drive between the eastern extent of the Inverell urban area and Barayamal National Park (refer **Figure 1** and **Figure 2**). The impact area would be confined to Lot 1 DP 1101540 and affect approximately 1.3ha of largely cleared land and includes 0.75ha (1.5km of 5m wide) for the sealed track, 0.3ha for a spectator observation hill and 0.25ha for car parking (refer **Plates 1 to 4** in **Appendix A**).

## 1.3. Site Description

### *Topography and Soil*

The study area lies within the sub-bioregion of Inverell Basalts within the Nandewar Bioregion (NPWS 2003). The topography comprises undulating long hillslopes with black loam and clay geology of basaltic origins (Morgan and Terrey 1992).

### *Landscape setting*

The study site is located on disturbed land with regenerating vegetation in between the largely cleared small holdings east of the Inverell residential area and remnant vegetation of the Barayamal National Park. The immediate surrounds are moderately cleared with sporadic areas of regenerating woodland and grazed pastures. A narrow vegetation corridor is located immediately to the south of the site along the northern bank of Lake Inverell.

### **Landuse**

Historically the site has been grazed predominantly by horses though may have been subject to occasional bush regeneration activities as evidenced by tube stock planting protection still located sporadically around the site. The site has been slashed annually and is in a generally degraded and highly modified state. The only infrastructure present are high voltage powerlines traversing the southern portion of the site.

## **2. Methodology**

---

The methodology used to conduct the ecological assessment included both a desktop review and field survey as follows:

### **2.1. Desktop Review**

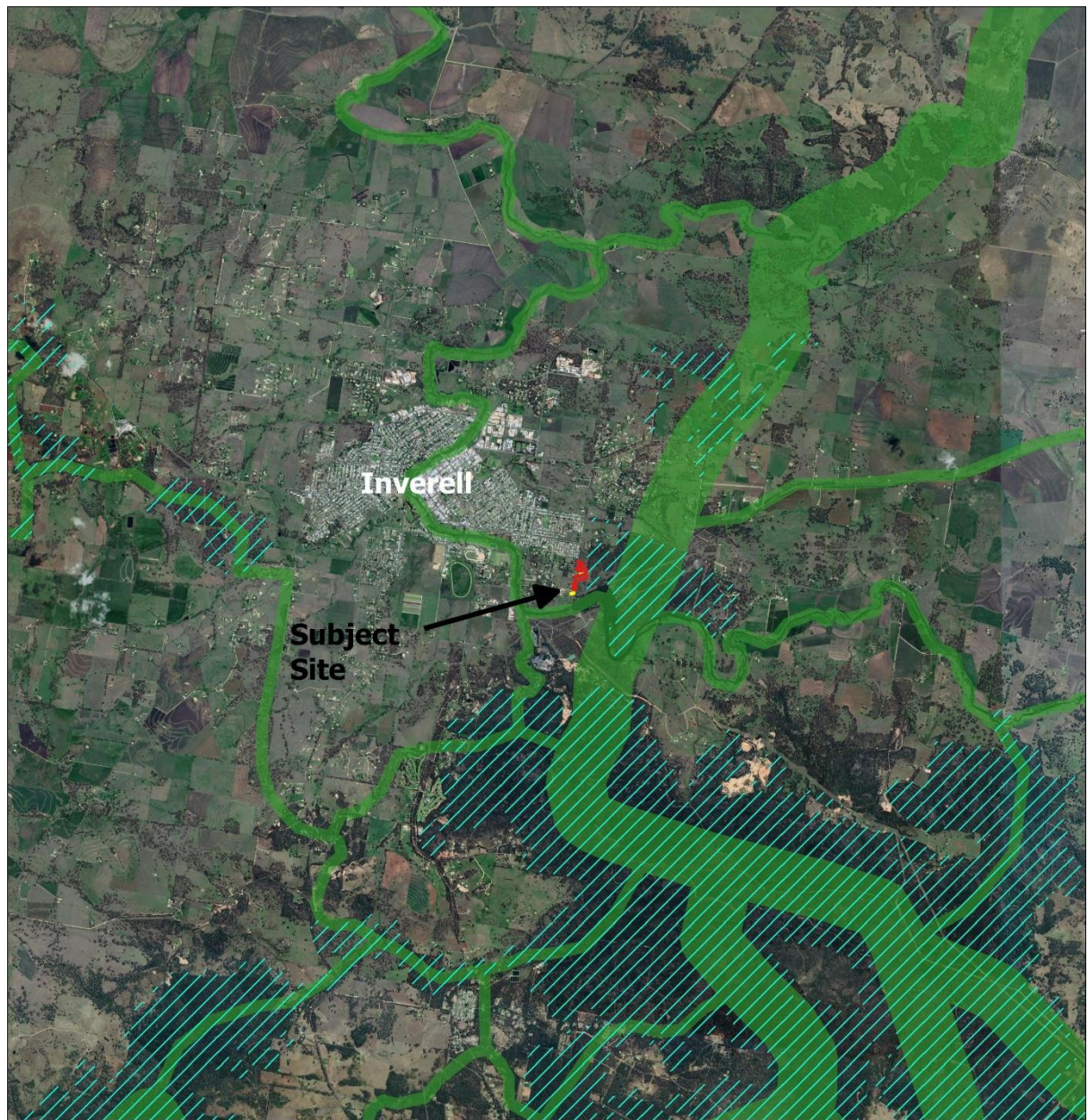
- A search of the National Parks and Wildlife Service (NPWS) *Atlas of NSW Wildlife (Bionet) database* to identify threatened species, populations and Endangered Ecological Communities (EECs) listed under the *Biodiversity Conservation Act 2016* and/or their habitats recorded on or within a 10km x 10km grid centred over the subject site (refer **Appendix C**);
- A search of the Federal *Environmental Protection and Biodiversity Conservation Act, 1999* (EPBC Act) *Protected Matters Search Tool* database to identify federally listed threatened species, ecological communities, RAMSAR sites and/or migratory species previously recorded within a 10km radius of the subject site (refer **Appendix C**);
- A review of the likelihood of occurrence of threatened species, populations and/or EECs at the subject site (refer **Appendix D**); and
- An evaluation of the wildlife corridor status of the site according to the fauna corridors/key habitats mapping for north eastern NSW (DEC, 2011).

### **2.2. Field Survey**

A site inspection was carried out by a suitably qualified and experienced ecologist on the 15<sup>th</sup> and 16<sup>th</sup> of May 2018. This contravenes the optimal survey time for the region of the summer months and as such the flora species detected are likely to be limited. Survey effort particularly targeted those threatened flora and fauna species identified as a result of the desktop assessment as possibly occurring at the location (refer **Appendix D**). The site inspection included:

- A survey of the vegetation along the proposed circuit, spectator hill and car park areas.
- Identifying and measuring the diameter of trees that may be removed;
- Count of tree hollows within trees marked for removal;
- Identification of potential fauna habitat features.
- Two nights of spotlighting and call playback targeting the Squirrel Glider.





**Figure 1 Locality**

### Legend

- Proposed circuit
- /// Fauna Key Habitats\_Nandewar
- /// Fauna Corridors\_Nandewar

0 1 2 3 4 5 km



Scale 1:100000 14/06/2018



**RECONECO**

Reconeco makes every effort to ensure this map is free from errors, but does not warrant the map or it's features are either spatially or temporally accurate or fit for a particular use. Reconeco provides this map without warranty of any kind whatsoever, either expressed or implied.

Source Image: Google Satellite

## 3. Results

---

### 3.1. Results of Desktop Assessment

The site is located on the edge of mapped key habitat and fauna corridors within the Nandewar bioregion.

Seventeen (17) threatened fauna species, eight threatened flora species and seven Endangered Ecological Communities were identified in the OEH BioNet database search under the Biodiversity Conservation Act (BC Act) as occurring within the search area. Additionally, a protected matters search identified Matters of National Environmental Significance within a 10km radius of the project site. These included potential habitat for four Threatened Ecological Communities (TECs), 30 threatened species and 12 migratory species.

The details of each threatened flora species/community identified in the BioNet search, including their conservation status, potential to occur at the subject site and potential for impact from the proposed works are presented as **Table D.1** (EEC) in **Appendix D**.

### 3.2. Results of Field Survey

#### 3.2.1. Flora

The vegetation associated with the greater area of the subject site is representative of Western Slopes Grassy Woodland and Derived Grasslands of Brigalow Belt and Nandewar (Keith Classification). The vegetation within the proposal area is a marginal representation of this vegetation class as the site is highly disturbed and modified through historical agricultural activities such as grazing, tree clearing and slashing. The site has some regenerating vegetation in the form of scattered trees and regrowth acacia scrub which is often slashed. The canopy species are dominated by Mugga Ironbark (*Eucalyptus sideroxylon*) with occasional Yellow Box (*Eucalyptus melliodora*), Black Cypress Pine (*Callitris endlicheri*) and White Box (*Eucalyptus albens*). The Northern Silver Wattle (*Acacia leucoclada*) is the dominant shrub/small tree with the ground cover consisting of a suite of commonly occurring introduced and native grass species such as Coolatai Grass (*Hyparrhenia hirta*), Kangaroo Grass (*Themeda triandra*) and Snow Grass (*Poa siberiana*) as well as other herbs and forbs.

No flora species listed under the BC Act or EPBC Act were detected within the proposed construction footprint although records of the state and federally listed Austral Toadflax (*Thesium australe*) are numerous in the area and includes one record on the subject site itself, located to the southeast of the proposed track and outside of construction footprint. Areas of the Endangered Ecological Community *White Box Yellow Box Blackely's Red Gum Woodland* are known to occur to the east of the subject site though it was not recorded within the proposal area and as such the community would not be directly or indirectly impacted.



The full list of species recorded at the site is included as **Appendix E** and the following table (**Table 3.1**) identifies the trees that will require removal as part of the proposed works. **Figure 2** illustrates the approximate location of the trees that will require removal and the area of modified pasture within the construction footprint.

**Table 3-1** Trees located within the construction footprint and require removal

<b>Taxon</b>	<b>Diameter at breast height (cm)</b>	<b>No. of stems</b>	<b>No. of Hollows</b>
<i>Eucalyptus sideroxylon</i>	300	2	0
<i>Eucalyptus sideroxylon</i>	300	2	0
<i>Eucalyptus sideroxylon</i>	400	1	0
<i>Eucalyptus sideroxylon</i>	150	1	0
<i>Standing dead</i>	250	1	0
<i>Casuarina cunninghamiana</i>	320	1	0
<i>Ulmus parviflora</i> *	700	8	0
<i>Eucalyptus sideroxylon</i>	270	1	0
<i>Eucalyptus sideroxylon</i>	400	1	0
<i>Eucalyptus albens</i>	250	1	0
<i>Eucalyptus melliodora</i>	550	1	0
<i>Eucalyptus melliodora</i>	200	1	0
<i>Acacia leucoclada</i>	170	1	0
<i>Eucalyptus melliodora</i>	600	5	0
<i>Callitris endichleri</i>	280	2	0
<i>Pinus radiata</i> *	200	1	0
<i>Pinus radiata</i> *	500	1	0

\* - denotes an introduced species



**Figure 2 Proposed offroad circuit and ancillary facilities**

### Legend

- Proposed circuit
- Ancillary facilities
- Trees proposed for removal
- Bionet threatened species records

0 50 100 150 200 m



Scale 1:3500 14/06/2018



Reconeco makes every effort to ensure this map is free from errors, but does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. Reconeco provides this map without warranty of any kind whatsoever, either expressed or implied.

Source Image: Google Satellite

**RECONECO**

### 3.2.2. Fauna

Incidental observations of fauna occurring in the subject site included commonly occurring avian species such as the Sulphur-crested Cockatoo (*Cacatua galerita*), Black-faced Cuckoo-shrike (*Coracina novaehollandiae*), Buff-rumped Thornbill (*Acanthiza reguloides*) and Crimson Rosella (*Platycercus elegans*) along with mammals Eastern Grey Kangaroo (*Macropus giganteus*), Brushtail Possum (*Trichosurus vulpecula*), Red Fox (*Vulpes vulpes*) and feral cat (*Felis catus*).

No fauna species or fauna populations listed under the BC Act or EPBC Act were detected within the proposed zone of disturbance. However, one tree adjacent to the proposed works (not proposed for removal) represents possible habitat for the BC Act and EPBC Act listed Squirrel Glider (*Petaurus norfolcensis*) although no gliders were detected during surveys including targeted call-playback and spotlight surveys.

*Conservation significance of subject site – Fauna habitats and corridor value.*

A habitat assessment is a component of predicting the occurrence of threatened species in the study area and helps to better assess the conservation value of the site and surrounds. Habitat features noted at the subject site have been summarised in **Table 3.1** as follows:

**Table 3.1** Summary of habitat features recorded at the subject site.

Habitat Feature	Frequency (Nil, Low, Med, High)
Hollow-bearing/habitat trees, including dead stags	Low - One habitat tree is located just outside the proposed construction footprint along the northern section of the track.
Bush rock and rocky outcrops	Nil
Natural burrows, such as those of the Hastings River mouse	Nil
Large trees with basal cavities	Nil
Logs	Low – Occasional fallen limbs containing hollows/crevices are located along the length of the proposed works zone. These would be retained or moved to areas of vegetation outside of the proposed clearance zone.
Wetlands, streams, rivers, dams and other water bodies	Nil
Nests and roosts	Nil
Wombat burrows	Nil
Dens used by Yellow-bellied Gliders, Squirrel Gliders and Brush-tailed Phascogales	Nil – None observed/located at the time of survey.
Yellow-bellied Glider and Squirrel Glider sap feed trees	Nil
Distinctive scats (e.g. Those of the Spotted-tailed Quoll or Koala)	Nil
Latrine and den sites of the Spotted-tailed Quoll	Nil

RECONECO



Allocasuarina spp. as associated with Glossy Black Cockatoo occurrence.	Nil
Flying-fox camps	Nil
Microchiropteran bat tree roosts	Low – Refer hollow bearing tree section above.
Microchiropteran bat subterranean roosts (caves, culverts, tunnels and disused mineshafts)	Nil
Swift Parrot and Regent Honeyeater feed or nest trees	Low – White Box ( <i>Eucalyptus albens</i> ) present at low frequency within the construction footprint.
Winter-flowering eucalypts	Medium – White Box and Mugga Ironbark flower into the winter months.
Permanent soaks and seepages in potential habitat for threatened amphibian species.	Nil
Areas that can act as corridors for plant or animal species.	Low – Refer to <b>Figure 1</b> for locations of mapped fauna corridors.

(Checklist based on OEH 2013 – field survey methods)

The study area afforded the following main habitat features as per **Table 3.1**:

- One habitat tree located adjacent to the proposed length of the works. This tree has potential roost habitat for arboreal mammals such as Squirrel Gliders and Microbats.
- White Box and Mugga Ironbark present at the subject site represent potential feed trees for the endangered Swift Parrot (*Lathamus discolor*) and critically endangered Regent Honeyeater (*Anthochaera phrygia*). Additionally, White Box is listed as a secondary Koala food tree species.

It should be noted that none of these species have been recorded on or in close proximity to the proposal area which is consistent with the highly modified degraded state of the habitat within the proposal area.

Never the less, a number of ameliorative measures and safeguards have been recommended for the project in order to lessen the impacts of proposed clearing on potentially occurring species outlined in **Section 5**.

## 4. Statutory Requirements

---

### 4.1. Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 (BC Act) provides a test for determining whether proposed development or activity likely to significantly affect threatened species or ecological communities, or their habitats (known as the '5-part test').

No threatened species or Endangered Ecological Communities were detected as a result of the site inspection, however, there is a known record of Austral Toadflax from the site (refer **Section 3**). The proposed activity would disturb approximately 1.3ha of potential habitat for the species and as such, a test of significance has been undertaken and included in this report as **Appendix F**. The assessment concluded that given the scale of the proposed works, the greater extent of available habitat in the locality and the proposed mitigation measures, the proposal is unlikely to result in a significant impact on the local occurrence of the subject species. Consequently, further consideration in the form of a Species Impact Statement is not required.

### 4.2. Environmental Protection and Biodiversity Conservation Act 1999

The federal legislation for the protection of the national environment and biodiversity conservation is the EPBC Act. The EPBC Act provides for the following:

- Identification and listing of Threatened Species and Threatened Ecological Communities;
- Development of Recovery Plans for listed species and ecological communities;
- Recognition of Key Threatening Processes; and (where appropriate)
- Reducing these processes through Threat Abatement Plans.

The EPBC Act states that a person must not, without approval under the act, take an action that has or will have, or is likely to have a significant impact on a matter of National Environmental Significance (NES). Similarly, the EPBC Act also identifies a number of 'Other Matters' it protects. Matters of NES and Other Matters, and whether the proposal is likely to have an impact on them, have been summarised as follows in **Table 4.2**.

**Table 4.2** Assessment of Impacts on Matters of NES and Other Matters as described in the EPBC Act.

Matter	Potential Impact (Y/N)	Comment
<b>Matters of National Environmental Significance (NES)</b>		
World Heritage Properties	N	The site is not a recorded World Heritage Property.

National Heritage Places	N	The site is not a recorded National Heritage Place.
Wetlands of International Importance	N	The site is not a Ramsar wetland or located near a Ramsar wetland.
Great Barrier Marine Park	N	Not Applicable (NA)
Commonwealth Marine Areas	N	The site is not a Commonwealth Marine Area.
Listed Threatened Ecological Communities	N	No listed threatened ecological communities are present within the construction footprint.
Threatened Species	Y	One nationally listed threatened species occurs with potential to be impacted by the works. One record of Austral Toadflax ( <i>Thesium australe</i> ) occurs onsite in addition to several records in proximity to the site. Although the record is outside of the construction footprint, an assessment of significance has been undertaken on the basis that the species habitat would be affected. It is the conclusion of this assessment that the action proposed is unlikely to have a significant impact (as defined in the EPBC Act) on the Austral Toadflax and consequently, a referral to the minister is considered unnecessary.
Migratory Species	N	The development site does not provide high conservation value habitat for listed migratory species.
<b>Other Matters</b>		
Commonwealth Land	N	NA
Commonwealth Heritage Places	N	The site is not a Commonwealth Heritage Place.
Listed Marine Species	N	NA
Whales and Cetaceans	N	NA
Critical habitats	N	There are no Critical Habitats recorded in vicinity of the subject site.
Commonwealth Reserves	N	There are no Commonwealth Reserves in proximity of the subject site.
<b>Extra Information</b>		
Places on the Register of the National Estate	N	The site is not a Place on the RNE.
State and Territory Reserves	N	There are no State or Territory Reserves in proximity of the proposed works.
Regional Forest Agreements	N	NA
Invasive Species	N	No invasive species as listed under the EPBC Act were detected on the subject site.

### 4.3. State Environmental Planning Policy No. 44 – Koala Habitat Protection

This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

(a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat;



- (b) by encouraging the identification of areas of core koala habitat; and
- (c) by encouraging the inclusion of areas of core koala habitat in environment protection zones.

Inverell Shire Council LGA is not listed in Schedule 1 of the policy and as such is not land to which this policy applies.

#### **4.4. NSW Fisheries Management Act 1994**

The *Fisheries Management Act 1994* aims to conserve develop and share the fishery resources of the State for the benefit of present and future generations. In particular, the objects of the act are to protect fish and fish stocks and protect threatened species, populations and ecological communities of fish and marine vegetation.

No areas of Key Fish Habitat are located within the proposed zone of disturbance nor are any downstream effects likely to occur such that consideration under this act would be required.

## 5. Impacts and Amelioration

---

### 5.1. Impacts

The proposal would result in the following impacts to the ecological values of the subject site:

- Seventeen (17) regrowth trees would be removed for the purposes of the circuit, three of which are introduced species of tree.
- The ancillary facilities (spectator hill and overflow carpark) would both be located in existing cleared areas and would not require the removal of additional trees.
- In total, 1.3ha of disturbed pasture/grassland and occasional regrowth acacia shrubs would also be disturbed by the construction footprint. This represents an incremental loss in potential habitat for the state and federally listed Austral Toadflax, however, no individual specimens were located within the construction footprint.

No other impacts on listed threatened species, ecological communities or their habitats would be affected.

Indirect impacts of the proposal include:

- Potential increase in weed invasion from increased public usage of the site.
- Potential translocation of pests and pathogens during the construction.

### 5.2. Amelioration Measures

It is recommended that the following amelioration measures and ecological safeguards be incorporated into planning for the project so as to minimise potential impacts on the flora and fauna of the subject site:

#### **Flora:**

1. Clearing of woodland is to be kept to the minimum required for the purposes of the proposed circuit;
2. No hollow bearing trees are to be removed;
3. Protection fencing to be installed to delineate clearing boundaries, including hard stand/turning bays and/or compound sites, and establish an environmental no-go zone thus avoiding the unnecessary clearing of woodland trees;
4. Equipment is to be washed-down before first entering the site so as to minimise the potential for the importation of seed from invasive species particular priority weeds identified in the Northern Tablelands Regional Strategic Weed Management Plan 2017 – 2022 under the *Biosecurity Act 2015*.
5. Spoils from excavation and clearing be retained on site where possible and used to rehabilitate the disturbance zone immediately upon the completion of upgrade works (these spoils would contain natural seedbank to aid in site regeneration); and

6. Rehabilitate surfaces following the completion of construction activities and removal of compound and/or stockpiles. This to include re-seeding with endemic woodland species, particularly groundcovers including grasses, to help reduce the potential for weed incursion.

#### **Fauna:**

7. Prior to felling, all trees must be inspected for by a suitably licensed and experienced ecologist to identify the presence of any birds' nests or possum dreys.
8. If a koala is found to be occupying a tree at the site, an exclusion zone is to be established (minimum of 50m) in which works are not to proceed until the individual relocates of its own volition.
9. Clearing of trees wherever possible should be avoided during spring and winter to avoid the disturbance, injury and death of breeding fauna (birds and arboreal mammals) and hibernating fauna (microbats and gliders).
10. Felled trees should be used to supplement the habitat values within the area. To avoid creating a feral pest harbour (foxes were observed on site) this timber must not be stacked or windrowed but must be laid individually on the ground across the area.
11. Any native fauna species discovered inhabiting trees to be cleared and/or disturbed by clearing must be captured and removed by persons licensed under the NPW Act 1974.
12. Should any animal be injured by the works, WIRES or a local vet should be contacted.

#### **General recommendations**

- A weed control plan should be implemented to mitigate the potential for increased weed incursions post construction. Control methods should be as recommended in the Department of Primary Industries New South Wales Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations 7th Edition or equivalent replacements for control of weeds, ensuring minimal off-target damage.
- A restoration plan for the site should be undertaken to enhance the general aesthetics and habitat value of the site and increase potential habitat for threatened species and ecological communities to establish post construction.

## 6. Conclusion

---

This ecological assessment has been prepared as an adjunct to a Review of Environmental Factors for the proposed off-road recreational circuit on Lake Inverell Drive, Inverell. In summary it is reported that:

- The proposal area in its current state represents a highly modified and degraded habitat with regrowth trees scattered throughout grazed pasture.
- One state and federal listed species (Austral Toadflax) is known to occur from the site however it was not located within the proposed construction footprint and no other threatened flora or fauna species were detected within the proposed construction footprint.
- No endangered or threatened ecological communities were found to occur within the construction footprint or on the subject site.
- Seventeen (17) trees comprised of commonly occurring species are located within the proposed construction footprint and would require removal.
- A number of amelioration measures (refer **Section 5.2** of this report) have been recommended to restrict the potential impact of the development on flora and fauna as a result of the proposed zone of development.



## 7. Bibliography

---

Carr, D. (2010) *Trees and Tall Shrubs of the North-West Slopes*. 2<sup>nd</sup> Edition.

DEC NSW, 2004, *Threatened Species Survey and Assessment: Guidelines for developments and activities (working draft)*, New South Wales Department of Environment and Conservation, Hurstville, NSW.

DEC NSW, 2007, *Threatened species assessment guidelines - The assessment of significance*, New South Wales Department of Environment and Conservation, Sydney South, NSW.

Department of Environment Protected Matters Search Tool,  
<http://www.environment.gov.au/epbc/pmst/> (Accessed 11/06/18)

Hodge, J. and McKemey, M. (2013) *Plants of the Gwydir Shire Volume 1*. Northern Tablelands Local Land Services, Inverell.

Muir, S., Rose, H.I. and McCormick, L.H. (2010) *Grasses of the Border Rivers-Gwydir Catchments Field Guide, Second Edition*. Border Rivers-Gwydir Catchment Management Authority.

NSW Department of Primary Industries 2018. New South Wales Weed Control Handbook – A guide to weed control in non-crop, aquatic and bushland situations 7th Edition

NSW National Parks and Wildlife Service (2003) *The Bioregions of New South Wales: their biodiversity, conservation and history* NSW National Parks and Wildlife Service Hurstville

NSW National Parks and Wildlife Service (NPWS), 2003. *Threatened Species of the New England Tablelands and North West Slopes of New South Wales*. NSW National Parks and Wildlife Service, Coffs Harbour and University of New England, Armidale.

NSW Office of Environment and Heritage (OEH), *Threatened species survey and assessment guidelines*, <http://www.environment.nsw.gov.au/threatenedspecies/surveymethodsfauna.htm>.

NSW Office of Environment and Heritage, 2013, *Field Survey Methods*.

OEH Bionet Atlas of NSW Wildlife, <http://www.bionet.nsw.gov.au/> (Accessed 15/05/18).

## Appendices

---

## Appendix A – Photographs of the subject site



**Plate 1** Section of proposed track along adjacent to Lake Inverell Drive



**Plate 2** Regrowth trees proposed for removal along the proposed track



**Plate 3** Modified pasture typical of the subject site



**Plate 4** Regrowth Mugga Ironbark proposed for removal.

## Appendix B – Construction diagrams/concept plan





Proposed Multi purposed Activity Track.

- Full track length =      Approx 1.58 km.
- "The Circuit" =      Approx 0.945 km.
- "The Link" =      Approx 0.370 km.
- "Heartbreak Hill" =      Approx 0.275 Km.







<div>Precise Designs</div> <div>Phone: 02 67214151 Mobile: 0427 732 473 Email: designs@precisedesigns.com.au</div>		Project: Proposed Criterium Cycle Track.		Client: Inverell Cycle 'n' Tri Club		<div>Drawing: Site Plan</div> <div>Sheet #: D6</div> <div>Scale: 1 : 1500 @A3</div>		<div>Drawing By: A.G.B.</div> <div>Drawing Status: Preliminary</div>		<div>Printed: 28/03/2018 12:53:54</div>		COPYRIGHT OF THIS DOCUMENT REMAINS THE PROPERTY OF PRECISE DESIGNS. UNAUTHORIZED COPYING OF THIS DOCUMENT IS PROHIBITED. THIS DOCUMENT SHALL ONLY BE USED IN ACCORDANCE WITH THE TERMS AND PURPOSE FOR WHICH IT WAS COMMISSIONED. ALL DIMENSIONS ARE TO BE CHECKED ON SITE PRIOR TO SET OUT AND CONSTRUCTION.	
--	--	--	--	-------------------------------------	--	---	--	--	--	---	--	---	--




## Appendix C – Database search results

Data from the BioNet BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°; ^^ rounded to 0.01°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Entities in selected area [North: -29.74 West: 151.09 East: 151.19 South: -29.84] returned a total of 241 records of 29 species.











Report generated on 15/05/2018 3:30 PM







Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Reptilia	Gekkonidae	2139	<i>Uvidicolus sphyrurus</i>		Border Thick-tailed Gecko	V,P	V	1	
Animalia	Aves	Anatidae	0216	<i>Oxyura australis</i>		Blue-billed Duck	V,P		1	
Animalia	Aves	Accipitridae	0226	<i>Haliaeetus leucogaster</i>		White-bellied Sea-Eagle	V,P	C	2	
Animalia	Aves	Accipitridae	0230	^^ <i>Lophoictinia isura</i>		Square-tailed Kite	V,P,3		1	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>		Little Lorikeet	V,P		18	
Animalia	Aves	Psittacidae	0302	^^ <i>Neophema pulchella</i>		Turquoise Parrot	V,P,3		5	

Animalia	Aves	Climacteridae	8127	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	V,P		10	
Animalia	Aves	Acanthizidae	0504	<i>Chthonicola sagittata</i>	Speckled Warbler	V,P		4	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>	Regent Honeyeater	E4A,P	CE	4	
Animalia	Aves	Pomatostomidae	8388	<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	V,P		1	
Animalia	Aves	Artamidae	8519	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V,P		7	
Animalia	Aves	Estrildidae	8324	<i>Poephila cincta cincta</i>	Black-throated Finch (southern subspecies)	E4,P	E	1	
Animalia	Aves	Estrildidae	0652	<i>Stagonopleura guttata</i>	Diamond Firetail	V,P		6	

---



Animalia	Mammalia	Dasyuridae	1008	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E	1	
Animalia	Mammalia	Phascolarctidae	1162	<i>Phascolarctos cinereus</i>	Koala	V,P	V	5	
Animalia	Mammalia	Petauridae	1137	<i>Petaurus norfolcensis</i>	Squirrel Glider	V,P		7	
Animalia	Mammalia	Vespertilionidae	T315	<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	V,P	V	1	
Plantae	Flora	Asteraceae	1559	<i>Leptorhynchus waitzia</i>	Button Immortelle	E1,P		1	
Plantae	Flora	Asteraceae	7855	<i>Picris evae</i>	Hawkweed	V,P	V	29	
Plantae	Flora	Convolvulaceae	6980	<i>Ipomoea diamantine nsis</i>	Desert Cow-Vine	E1,P		1	
Plantae	Flora	Fabaceae (Faboideae)	9174	<i>Indigofera baileyi</i>	Bailey's Indigo	E1,P		6	
Plantae	Flora	Myrtaceae	9126	<i>Callistemon pungens</i>		P	V	6	
Plantae	Flora	Myrtaceae	4123	<i>Eucalyptus mckieana</i>	McKie's Stringybark	V,P	V	1	

Plantae	Flora	Myrtaceae	9164	<i>Eucalyptus rubida subsp. barbigerorum</i>	Blackbutt Candlebark	V,P	V	7	
Plantae	Flora	Myrtaceae	9522	<i>Homoranthus prolixus</i>	Granite Homoranthus	V,P	V	15	
Plantae	Flora	Poaceae	4895	<i>Dichanthium setosum</i>	Bluegrass	V,P	V	2	
Plantae	Flora	Polygalaceae	5260	<i>Polygala linariifolia</i>	Native Milkwort	E1,P		3	
Plantae	Flora	Santalaceae	5871	<i>Thesium australe</i>	Austral Toadflax	V,P	V	71	
Plantae	Flora	Zamiaceae	10530	<i>Macrozamia humilis</i>	Inverell Cycad	E1,P		24	

Data from the BioNet BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°; ^^ rounded to 0.01°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Communities in selected area [North: -29.74 West: 151.09 East: 151.19 South: -29.84] returned 0 records for 7 entities.

Report generated on 15/05/2018 3:32 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Community				<i>Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions</i>		Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions	E3		K	
Community				<i>Howell Shrublands in the New England Tableland and Nandewar Bioregions</i>		Howell Shrublands in the New England Tableland and Nandewar Bioregions	E3		K	
Community				<i>Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penepplain, Nandewar and Brigalow Belt South Bioregions</i>		Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penepplain, Nandewar and Brigalow Belt South Bioregions	E3	E	K	

Community	<i>McKies Stringybark/Blackbutt Open Forest in the Nandewar and New England Tableland Bioregions</i>	McKies Stringybark/Blackbutt Open Forest in the Nandewar and New England Tableland Bioregions	E3		P	
Community	<i>Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions</i>	Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions	E3	E	P	
Community	<i>Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion</i>	Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion	E3	E	P	
Community	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	White Box Yellow Box Blakely's Red Gum Woodland	E3	CE	K	





# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 12/06/18 09:34:18

[Summary](#)

[Details](#)

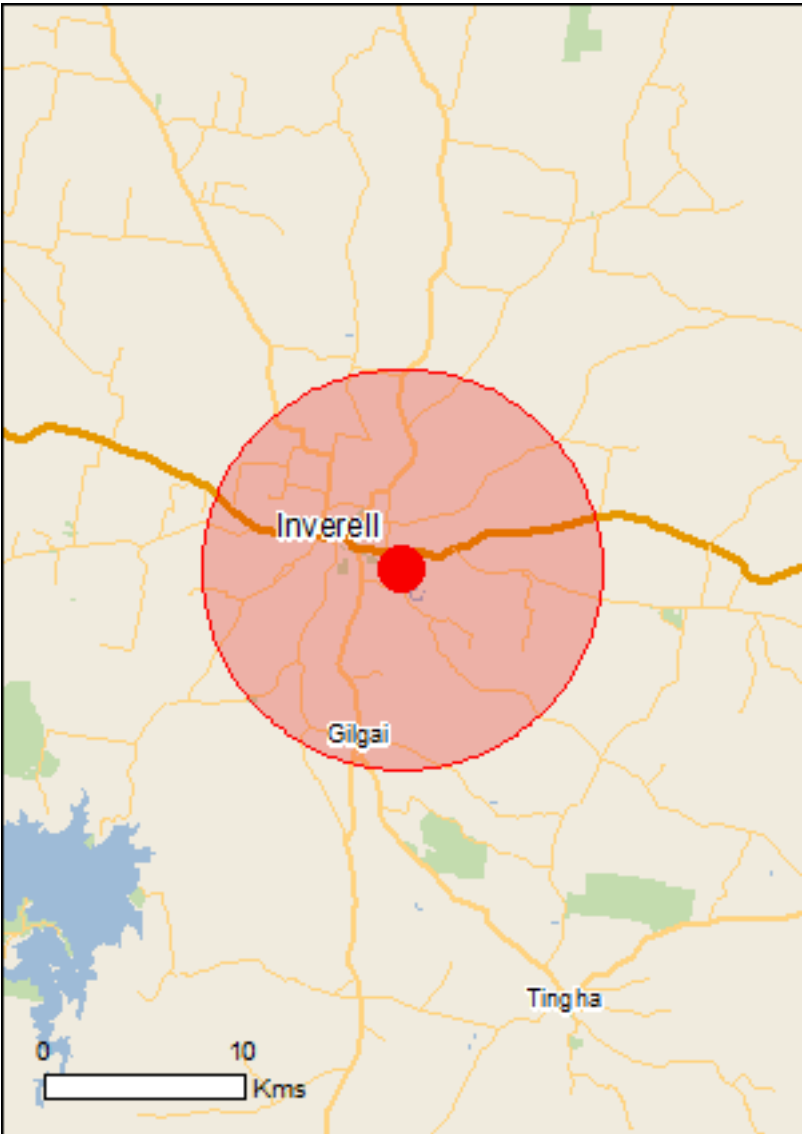
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are  
©Commonwealth of Australia  
(Geoscience Australia), ©PSMA 2010

[Coordinates](#)

Buffer: 10.0Km



# Summary

## Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance:</a>	4
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	4
<a href="#">Listed Threatened Species:</a>	30
<a href="#">Listed Migratory Species:</a>	12

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Land:</a>	4
<a href="#">Commonwealth Heritage Places:</a>	1
<a href="#">Listed Marine Species:</a>	18
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Commonwealth Reserves Marine:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<a href="#">State and Territory Reserves:</a>	3
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	28
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[ Resource Information ]
Name	Proximity	
<a href="#">Banrock station wetland complex</a>	1100 - 1200km	
<a href="#">Gwydir wetlands: gingham and lower gwydir (big leather) watercourses</a>	150 - 200km upstream	
<a href="#">Riverland</a>	1000 - 1100km	
<a href="#">The coorong, and lakes alexandrina and albert wetland</a>	1200 - 1300km	

Listed Threatened Ecological Communities	[ Resource Information ]
--	--------------------------

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
<a href="#">Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland</a>	Critically Endangered	Community likely to occur within area
<a href="#">New England Peppermint (<i>Eucalyptus nova-anglica</i>) Grassy Woodlands</a>	Critically Endangered	Community may occur within area
<a href="#">Weeping Myall Woodlands</a>	Endangered	Community may occur within area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community likely to occur within area

Listed Threatened Species	[ Resource Information ]
---------------------------	--------------------------

Name	Status	Type of Presence
Birds		
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Vulnerable	Species or species habitat may occur within area
<a href="#">Geophaps scripta scripta</a> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Poephila cincta cincta</a> Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species

Name	Status	Type of Presence
habitat may occur within area		
Fish		
<a href="#">Maccullochella peelii</a> Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area
Frogs		
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area
Mammals		
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
<a href="#">Boronia granitica</a> Granite Boronia [18598]	Endangered	Species or species habitat may occur within area
<a href="#">Callistemon pungens</a> [55581]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Dichanthium setosum</a> bluegrass [14159]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Eucalyptus caleyi subsp. ovendenii</a> Ovenden's Ironbark [56193]	Vulnerable	Species or species habitat may occur within area
<a href="#">Eucalyptus mckieana</a> McKie's Stringybark [20199]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Eucalyptus rubida subsp. barbigerorum</a> Blackbutt Candlebark [64618]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Homoranthus prolixus</a> [55198]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Picris evae</a> Hawkweed [10839]	Vulnerable	Species or species habitat likely to occur



Name	Status	Type of Presence
within area		
<a href="#">Prasophyllum sp. Wybong (C.Phelps ORG 5269)</a> a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Tylophora linearis</a> [55231]	Endangered	Species or species habitat may occur within area
Reptiles		
<a href="#">Uvidicolus sphyrurus</a> Border Thick-tailed Gecko, Granite Belt Thick-tailed Gecko [84578]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Wollumbinia belli</a> Bell's Turtle, Western Sawshelled Turtle, Namoi River Turtle, Bell's Saw-shelled Turtle [86071]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[ <a href="#">Resource Information</a> ]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]		Species or species habitat likely to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within

Name	Threatened	Type of Presence
------	------------	------------------

[Tringa nebularia](#)

Common Greenshank, Greenshank [832]

Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land

[ Resource Information ]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
------

Commonwealth Land - Australian Postal Commission  
Commonwealth Land - Australian Telecommunications Commission  
Commonwealth Land - Commonwealth Bank of Australia  
Defence - AIRTC INVERELL

Commonwealth Heritage Places

[ Resource Information ]

Name	State	Status
Historic		
<a href="#">Inverell Post Office</a>	NSW	Listed place

Listed Marine Species

[ Resource Information ]

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat may occur within area

[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species habitat likely to occur within area

[Ardea alba](#)

Great Egret, White Egret [59541]

Species or species habitat known to occur within area

[Ardea ibis](#)

Cattle Egret [59542]

Species or species habitat may occur within area

[Calidris acuminata](#)

Sharp-tailed Sandpiper [874]

Species or species habitat may occur within area

[Calidris ferruginea](#)

Curlew Sandpiper [856]

Critically Endangered

Species or species habitat may occur within area

[Calidris melanotos](#)

Pectoral Sandpiper [858]

Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]		Species or species habitat likely to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]		Species or species habitat likely to occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]	Endangered*	Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves		[ Resource Information ]
Name		State
Barayamal		NSW
Goonoowigal		NSW
Tingha Plateau		NSW
Invasive Species		[ Resource Information ]
Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.		
Name	Status	Type of Presence
Birds		

Name	Status	Type of Presence
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat may occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur



Name	Status	Type of Presence
		within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643] Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

# Coordinates

-29.7882 151.1388

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

## Appendix D – Threatened Species Likelihood of Occurrence.

**Table D.1** Threatened flora species known to occur in the greater locality (as derived from database searches) and their potential to occur at the subject site and/or be impacted by the proposal.

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix F)
		TSC Act	EPBC Act				
<i>Callistemon pungens</i>	-	-	V	Rocky watercourses, usually with sandy granite (occasionally basalt) creek beds	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Dichanthium setosum</i>	Bluegrass	V	V	Often found in moderately disturbed areas such as cleared woodland, grassy roadside remnants and highly disturbed pasture.	Y	Low	N - The project area contains some potential habitat, however, species not recorded on site, no records exist in close proximity to the site.
<i>Eucalyptus Mckieana</i>	McKie's Stringybark	V	V	found in grassy open forest or woodland on poor sandy loams, most commonly on gently sloping or flat sites	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Eucalyptus rubida subsp. barbigerorum</i>	Blackbutt Candlebark	V	V	Grassy woodland on medium or high fertility soils. Often on cold flats	Y	Low	N - The project area contains potential habitat, however, species not recorded within the proposed construction footprint.
<i>Homoranthus prolixus</i>	Granite Homoranthus	V	V	Homoranthus prolixus grows in heath patches, in skeletal soil among crevices of granite outcrops.	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Ipomoea diamantinensis</i>	Desert Cow-vine	E	-	Grows on clay soils on floodplains, often in shallow water and mud on cracking grey clay	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Indigofera baileyi</i>	Bailey's Indigo	E	-	Open woodlands on granite or basalt soils.	Y	Low	N - The project area contains potential habitat, however, species not recorded within the proposed construction footprint.



Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix F)
		TSC Act	EPBC Act				
<i>Macrozamia humilis</i>	Inverell Cycad	E	-	The single known population occurs in low dry woodland on sandy soil on an outcrop of laterite-capped granite.	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted. This species only known from one location.
<i>Picris evae</i>	Hawkweed	E	V	Open Eucalyptus forest and Dichanthium grassland, roadsides and cultivated areas (paddocks)	Y	Low	N - The project area contains potential habitat, however, species not recorded within the proposed construction footprint.
<i>Polygala linariifolia</i>	Native Milkwort	E	-	Sandy soils in dry eucalypt forest and woodland with a sparse understorey. The species has been recorded from the Inverell and Torrington districts growing in dark sandy loam on granite in shrubby forest of <i>Eucalyptus caleyi</i> , <i>Eucalyptus dealbata</i> and <i>Callitris</i> , and in yellow podsolic soil on granite in layered open forest	Y	Low	N - The project area contains potential habitat, however, species not recorded within the proposed construction footprint.
<i>Thesium australe</i>	Austral Toadflax	V	V	Occurs in grassland on coastal headlands or grassland and grassy woodland away from the coast	Y	High	Y – A 5-part test has been undertaken for the species.

**Table D.2** Threatened fauna species known to occur in the greater locality (as derived from database searches) and their potential to occur at the subject site and/or be impacted by the proposal.

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<b>Aves</b>							
<i>Anthochaera phrygia</i>	Regent Honeyeater	E	E	Inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak	Y	Low	N - The project area is adjacent to potential habitat, however, only 4 historical record exist, and no preferred habitat would be impacted.
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V	-	Primarily inhabit dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. It has also been recorded in shrublands, heathlands and very occasionally in moist forest or rainforest. Also found in farmland, usually at the edges of forest or woodland.	Y	Low	N - Records exist in proximity to the proposal area, however these are older records associated with the nearby Barayamal National Park, and no preferred habitat would be impacted.
<i>Chthonicola sagittata</i>	Speckled Warbler	V	-	A wide range of <i>Eucalyptus</i> dominated communities that have a grassy understorey, often on rocky ridges or in gullies.	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	V	-	Occurs in eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. It is less commonly found on coastal plains and ranges. Mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Glossopsitta pusilla</i>	Little Lorikeet	V	-	Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used. Nests in proximity to feeding areas most typically selecting hollows in the limb or trunk of smooth-barked Eucalypts. Riparian trees often chosen, including species like Allocasuarina.	Y	Low	N - Records exist in proximity to the proposal area, however these are older records associated with the nearby Barayamal National Park, and no preferred habitat would be impacted.

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<i>Haliaeetus leucogaster</i>	White Bellied Sea Eagle	V		Occurs at sites near the sea or sea-shore, such as around bays and inlets, beaches, reefs, lagoons, estuaries and mangroves; and at, or in the vicinity of freshwater swamps, lakes, reservoirs, billabongs and saltmarsh. Breeding habitat consists of mature tall open forest, open forest, tall woodland, and swamp sclerophyll forest close to foraging habitat. Nest trees are typically large emergent eucalypts	N	Low	N - Records exist in proximity to the proposal area, however these are associated with nearby Lake Inverell. No preferred habitat would be impacted.
<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses.	Y	Low	N - Records exist in proximity to the proposal area, however these are older records associated with the nearby McIntyre River, and no preferred habitat would be impacted.



Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<i>Neophema pulchella</i>	Turquoise Parrot	V	-	Lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland. Usually seen in pairs or small, possibly family, groups and have also been reported in flocks of up to thirty individuals. Prefers to feed in the shade of a tree and spends most of the day on the ground searching for the seeds or grasses and herbaceous plants, or browsing on vegetable matter. Forages quietly and may be quite tolerant of disturbance. However, if flushed it will fly to a nearby tree and then return to the ground to browse as soon as the danger has passed. Nests in tree hollows, logs or posts, from August to December.	N	Low	N - Records exist in proximity to the proposal area, however these are associated with nearby Goonoowigal State Conservation Area. No preferred habitat would be impacted.
<i>Oxyura australis</i>	Blue-billed Duck	V	-	The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation. The species is completely aquatic, swimming low in the water along the edge of dense cover. It will fly if disturbed, but prefers to dive if approached.	N	Low	N - Records exist in proximity to the proposal area, however these are associated with nearby Lake Inverell. No preferred habitat would be impacted.
<i>Poephila cincta cincta</i>	Black-throated Finch	E	E	<i>Eucalypt</i> woodland and riverside vegetation, including paperbark and wattle shrubland	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.

## RECONECO

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler	V	-	Box-Gum Woodlands on the slopes, and Box-Cypress-pine and open Box Woodlands on alluvial plains.	Y	Low	N - The project area has potential habitat, however, only 1 historical record exists.
<i>Stagonopleura guttata</i>	Diamond Firetail	V	-	Found in grassy eucalypt woodlands, including Box-Gum Woodlands and Snow Gum <i>Eucalyptus pauciflora</i> Woodlands	Y	Low	N - The project area has potential habitat, however, only 4 historical records exist associated with nearby conservation areas.
<b>Mammalia</b>							
<i>Dasyurus maculatus maculatus</i>	Spotted-tailed Quoll	V	E	Dry and moist eucalypt forests and rainforests, fallen hollow logs, large rocky outcrops.	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-	Inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas.	N	Low	N - The proposal area has potential foraging habitat but no hollow bearing trees would be removed and only one habitat tree is located in proximity to construction footprint.
<i>Phascolarctos cinereus</i>	Koala	V	V	The Koala inhabits eucalypt forest and woodland. The suitability of forest and woodland communities as habitat for Koalas is influenced by the size and species of trees present, soil nutrients, climate, rainfall and the size and disturbance history of the habitat patches.	Y	Low – Only secondary food tree species present. Trees have no evidence of Koala use.	N – No pellets as evidence of recent use and no Koalas detected during field survey and the nearest historical record is over 2km from the proposal area. Only one secondary food tree species would be impacted.
<b>Microbats</b>							

## RECONECO

Scientific Name	Common Name	Status		Habitat Requirement	Subject site contains suitable habitat (Y/N)	Likelihood of occurrence	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
		TSC Act	EPBC Act				
<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	V	V	Inhabits a variety of vegetation types, including mallee, bullock Allocasuarina leuhmanni and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland. Roosts in tree hollows, crevices, and under loose bark.	Y	Low	N - The proposal area does contain marginal representations of preferred foraging habitat, although only one historical record exists and no suitable roosting habitat would be impacted.
<b>Reptilia</b>							
<i>Uvidicolus sphyrurus</i>	Border Thick-tailed Gecko	-	V	Forest and woodland of the Granite Belt Highlands (New England)	N	Low	N - The proposal area does not contain suitable habitat nor would any adjacent potential habitat be impacted.

**Key:** V – Vulnerable. E – Critically Endangered. E – Endangered

**Table D.3** Endangered Ecological Communities Derived from Database Searches and their Potential to Occur at the Subject Site.

Endangered Ecological Community	Status		Occurs on site (Y/N)	Significant Impact Assessment considered necessary (Y/N)? (If yes refer Appendix I)
	TSC Act	EPBC Act		
Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions	E3	-	N	N
Howell Shrublands in the New England Tableland and Nandewar Bioregions	E3	-	N	N
Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Penepplain, Nandewar and Brigalow Belt South Bioregions	E3	E	N	N
McKies Stringybark/Blackbutt Open Forest in the Nandewar and New England Tableland Bioregions	E3	-	N	N
Semi-evergreen Vine Thicket in the Brigalow Belt South and Nandewar Bioregions	E3	-	N	N
Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion	E3	E		N
White Box Yellow Box Blakely's Red Gum Woodland	E3	CE	N	N

**Key:** E – Endangered.  
C – Critically Endangered.

## Appendix E – Flora and Fauna species recorded at the subject site.

**Table F.1** Flora and fauna species recorded at the subject site

Species	Common Name
<b>Flora</b>	
<i>Acacia leucoclada</i>	Northern Silver Wattle
<i>Avena fatua</i>	Wild Oats*
<i>Bidens subalternans</i>	Greater Beggar's Ticks*
<i>Bothriochloa macra</i>	Red Grass
<i>Brachyschome dentata</i>	Daisy
<i>Bursaria spinosa</i>	-
<i>Callitris endichleri</i>	Black Cypress Pine
<i>Cirsium vulgare</i>	Spear Thistle*
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Dodonaea viscosa</i> subs. <i>Angustissima</i>	Narrow-leaf Hop-bush
<i>Echium plantagineum</i>	Patterson's Curse*
<i>Enneapogon nigricans</i>	Nine-awn Grass
<i>Eragrostis curvula</i>	African Lovegrass*
<i>Eucalyptus albens</i>	White Box
<i>Eucalyptus melliodora</i>	Yellow Box
<i>Eucalyptus sideroxylon</i>	Mugga Ironbark
<i>Hyparthenia hirta</i>	Coolatai Grass*
<i>Hypochaeris radicata</i>	Catsear*
<i>Juncus</i> sp.	-
<i>Lolium perenne</i>	Perennial Ryegrass*
<i>Melilotus albus</i>	Bokhara*
<i>Plantago lanceolata</i>	Plantain*
<i>Poa siberiana</i>	Snow Grass
<i>Rosa rubiginosa</i>	Sweet Briar*
<i>Rumex brownii</i>	Swamp Dock
<i>Rumex Crispus</i>	Curled dock*
<i>Sida rhombifolia</i>	Paddys Lucerne*
<i>Sorghum leiocladum</i>	Wild Sorghum
<i>Themeda triandra</i>	Kangaroo Grass
<i>Verbena rigida</i>	Veined Verbena*
<b>Fauna</b>	
<b>Avifauna</b>	
<i>Acanthiza reguloides</i>	Buff-rumped Thornbill
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Platycercus elegans</i>	Crimson Rosella
<b>Mammals</b>	



Species	Common Name
<i>Felis catus</i>	Cat*
<i>macropus giganteus</i>	Eastern Grey Kangaroo
<i>Trichosaurus vulpecula</i>	Brushtail Possum
<i>Vulpes Vulpes</i>	Red Fox*

**Key:**     \* - Exotic and/or weed species.

## Appendix F – 5-part tests (BC Act listed species)

Assessments of significance have been completed for the listed Austral Toadflax.

**Table F-1 Summary of Conservation Status**

Scientific Name	Common Name	NSW Status	Comm. Status	Habitat and Ecology * #	Threats * #
<i>Thesium australe</i>	Austral Toadflax	V	V	<ul style="list-style-type: none"> <li>Occurs in grassland on coastal headlands or grassland and grassy woodland away from the coast.</li> <li>Often found in association with Kangaroo Grass (<i>Themeda australis</i>).</li> <li>A root parasite that takes water and some nutrient from other plants, especially Kangaroo Grass.</li> </ul>	<ul style="list-style-type: none"> <li>Loss and degradation of habitat and/or populations for residential, infrastructure and agricultural developments.</li> <li>Loss and degradation of habitat and/or populations by intensification of grazing regimes.</li> <li>Loss and degradation of habitat and/or populations by invasion of weeds.</li> <li>Loss and degradation of habitat and/or populations from road works (particularly widening or re-routing).</li> </ul>

**Sources:**

\* — NSW National Parks and Wildlife Service (NPWS), 2002. *Threatened Species of the Upper North Coast of New South Wales - Fauna*. NSW National Parks and Wildlife Service, Coffs Harbour.

## — Office of Environment and Heritage (OEH), 2017, NSW Threatened Species Profiles , <http://www.environment.nsw.gov.au/threatenedspeciesapp/default.aspx?keywords=> (Accessed June 2018).

- a) *in the case of a threatened species, whether the proposed development or activity 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 proposed action would cause relatively minor disturbance to the local Toadflax population given the following factors:

- The extent of proposed disturbance to Toadflax habitat is limited to the removal of 1.3ha of potential habitat.
- Approximately 17ha of potential habitat would be retained on the subject site in addition to over 1000ha of potential habitat available immediately adjacent to the site.
- Only one record of the species is known on the subject site and it is located outside of the proposed construction footprint.

Given the above factors, it is unlikely that the proposed action would 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.

- b) *in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:***

- 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. An endangered or critically endangered ecological community is not being considered.

- c) *in relation to the habitat of a threatened species or ecological community:***

- i. the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and***

The extent of habitat to be removed is approx. 1.3ha, which consists of modified habitat on a previously grazed and disturbed site.

- ii. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and***

The Proposal would not further fragment available habitat in the locality for the subject species, with impacts being confined to the existing disturbed site and over 1000ha of potential habitat located adjacent to the site.

- iii. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality***

The Proposal would not remove any habitat of importance to any of the subject species or communities. Quality habitat for the species occurs in the locality with over 1000ha of continuous habitat within 10km of the project area.

- d) *whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),***

The Proposal would not have an adverse effect on any declared area of outstanding biodiversity value.

**e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of, a key threatening process.**

A threatening process is defined under the *Biodiversity Conservation Act 2017* as a process that threatens, or may have the capability to threaten, the survival or evolutionary development of species, populations or ecological communities. The current list of key threatening processes (KTPs) and whether the Proposal constitutes any KTPs, is summarised in **Table F.2**.

The Proposal would likely contribute to an incremental and cumulative increase to the Key Threatening Processes of:

1. Clearing of Native Vegetation.

However, the extent to which the proposal would contribute to this process is considered relatively insignificant with regard to the resources in the locality.

**Conclusion:**

It is the conclusion of this assessment that given the scale of the proposed works, the greater extent of available habitat in the locality and the proposed safeguards, the proposal is unlikely to result in a significant impact on the local occurrence of the subject species. Consequently, further consideration in the form of a Species Impact Statement is not required.

**Table F.2 Impact of Proposed Works as a Key Threatening Process**

<b>Listed Key Threatening Processes (as described in the final determination of the Scientific Committee to list the threatening process)</b>	<b>Is the development or activity proposed of a class of development or activity that is recognised as a threatening process?</b>		
	<b>Likely</b>	<b>Possible</b>	<b>Unlikely</b>
Aggressive exclusion of birds by noisy miners ( <i>Manorina melanoccephala</i> )			✓
Alteration of habitat following subsidence due to longwall mining			✓
Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands			✓
Anthropogenic climate change			✓
Bush rock removal			✓
Clearing of native vegetation	✓		
Competition and grazing by the feral European rabbit ( <i>Oryctolagus cuniculus</i> )			✓
Competition and habitat degradation by feral goats ( <i>Capra hircus</i> )			✓
Competition from feral honey bees ( <i>Apis mellifera</i> )			✓
Death or injury to marine species following capture in shark control programs on ocean beaches			✓
Entanglement in or ingestion of anthropogenic debris in marine and estuarine environments			✓
Forest Eucalypt dieback associated with over-abundant psyllids and bell miners			✓
High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition			✓
Herbivory and environmental degradation caused by feral deer			✓

RECONECO

Listed Key Threatening Processes (as described in the final determination of the Scientific Committee to list the threatening process)	Is the development or activity proposed of a class of development or activity that is recognised as a threatening process?		
	Likely	Possible	Unlikely
Importation of red imported fire ants ( <i>Solenopsis invicta</i> )			✓
Infection by psittacine circoviral (beak and feather) disease affecting endangered psittacine species and populations			✓
Infection of frogs by amphibian chytrid causing the disease chytridiomycosis			✓
Infection of native plants by <i>Phytophthora cinnamomi</i>			✓
Introduction and Establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae			✓
Introduction of the large earth bumblebee ( <i>Bombus terrestris</i> )			✓
Invasion and establishment of exotic vines and scramblers			✓
Invasion and establishment of Scotch broom ( <i>Cytisus scoparius</i> )			✓
Invasion and establishment of the cane toad ( <i>Bufo marinus</i> )			✓
Invasion of native plant communities by African Olive <i>Olea europaea</i> L. subsp. <i>cuspidata</i>			✓
Invasion, establishment and spread of Lantana camara			✓
Invasion of native plant communities by <i>Chrysanthemoides monilifera</i> (bitou bush and boneseed)			✓
Invasion of native plant communities by exotic perennial grasses			✓
Invasion of the yellow crazy ant ( <i>Anoplolepis gracilipes</i> (Fr. Smith) into NSW			✓
Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants			✓
Loss of hollow-bearing trees			✓
Loss or degradation (or both) of sites used for hill-topping by butterflies			✓
Predation and hybridisation of feral dogs ( <i>Canis lupus familiaris</i> )			✓
Predation by the European red fox ( <i>Vulpes vulpes</i> )			✓
Predation by the feral cat ( <i>Felis catus</i> )			✓
Predation by <i>Gambusia holbrooki</i> Girard, 1859 (plague minnow or mosquito fish)			✓
Predation by the ship rat ( <i>Rattus rattus</i> ) on Lord Howe Island			✓
Predation, habitat degradation, competition and disease transmission by feral pigs ( <i>Sus scrofa</i> )			✓
Removal of dead wood and dead trees			✓



## Appendix G – Assessments of Significant Impact (EPBC Act listed species)

### Austral Toadflax *Thesium astrale*.

#### Background Information:

For the purposes of assessing the potential impact on this community as per the requirements of the EPBC Act, the conservation status, habitat requirements and main threats for the species have been summarised previously in **Table F.1**. As mentioned previously, also noteworthy for the purposes of this assessment is that a test of significance under the *Biodiversity Conservation Act 2017* has also been completed for the proposal with the conclusion that the proposal is unlikely to result in a significant impact on the local occurrence of the species.

According to the *Matters of National Environmental Significance - Significant impact guidelines 1.1 - Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth of Australia, 2009), An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

#### **A) Lead to a long-term decrease in the size of an important population of a species:**

The proposed action would cause relatively minor disturbance to the local population of the Toadflax given the following factors:

- No individual specimens were located within the proposed construction footprint.
- Approximately 15.7ha of the 17ha of habitat on the subject site would remain intact.
- Large expanses of similar potential habitat (over 1000ha) occur in the immediate vicinity of the subject site.
- The works are proposed for a highly modified and disturbed parcel of land already subject to anthropogenic influences such as slashing and grazing.

Given the above-listed factors, it is unlikely that the proposed action would lead to a long-term decrease in a population of the species, and additionally, may improve the quality of the remaining habitat through improved management practices and natural regeneration.

#### **B) Reduce the area of occupancy of an important population.**

As no Toadflax individuals were located within the proposed construction footprint and BioNet records indicate many Toadflax records are present in the subject area, it is considered that there is no important population of the species located on this subject site.

The proposal would remove approximately 1.3 ha of potential habitat. However, the zone of proposed works is not at the limit of the species range and the potential impact on Toadflax habitat is of a relatively minor scale given the retained habitat onsite and the expanse of neighbouring potential habitat

immediately adjacent to the subject site. It is therefore considered that the proposed action would not reduce the area of occupancy of an important population.

**C) Fragment an existing important population into two or more populations.**

Not applicable. An important population is not being considered.

**D) Adversely affect habitat critical to the survival of a species.**

The habitat to be affected would not be considered critical to the survival of the Toadflax in the locality, especially given it is comprised largely of highly modified and disturbed pasture.

**E) Disrupt the breeding cycle of an important population.**

Given that the proposal is largely comprised of a 5m wide circuit contained to the subject property and that no Toadflax individuals were located within the proposed construction footprint, it is unlikely that that proposed action would disrupt the breeding cycle of the local population.

**F) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

The proposed works are of a limited scale and are unlikely to affect the availability of habitat such that the Toadflax as a species is likely to decline. With the correct management actions on the retained habitat, the local occurrence of the species is likely to increase.

**G) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.**

The proposal is unlikely to modify the site such that invasive species (further to the significant amount of introduced weeds that are already present on much of the site) would be encouraged to become established in an area of habitat.

**H) Introduce disease that may cause the species to decline.**

The extent of proposed impact and the proposed use of the site is similar to the adjacent Lake Inverell bushwalking and picnic areas and is therefore unlikely to increase the chances of introducing disease further to current conditions.

**I) Interfere substantially with the recovery of the species.**

No approved recovery plan has been prepared for the Austral Toadflax. There are proposed activities to assist the species as follows:

- Protect known populations from changes to land use.
- Do not undertake road works, pasture modification or other changes in land use that may affect populations.
- Do not increase grazing pressures on sites where populations persist - reduce grazing pressures where possible.
- Undertake weed control in and adjacent to populations, taking care to spray or dig out only target weeds.
- Mark sites and potential habitat onto maps (of the farm, shire, region, etc) used for planning (e.g. road works, residential and infrastructure developments, remnant protection, rehabilitation).
- Search for new populations in potential habitat.

The proposed action is inconsistent with the aim of not undertaking pasture modification. However, the action is consistent with removing grazing pressure and undertaking weed control as activities to assist the species.

## **Conclusion**

It is the conclusion of this assessment that the action proposed is unlikely to have a significant impact (as defined in the EPBC Act) on the Austral Toadflax and consequently, a referral to the minister is considered unnecessary.

## **APPENDIX C – Cultural Heritage Assessment**

# **Inverell Off-Road Recreational Circuit Lake Inverell Reserve Aboriginal Cultural Heritage Assessment**

Prepared by Tony Sonter of Artefact and Aspect  
(Historical and Archaeological Consultancy)  
for Inverell Shire Council to whom copyright is given.  
November 2018

This report contains no material identified as sensitive, restricted or of a confidential nature and therefore has no restrictions on use if quoted with appropriate attribution and referencing.





# 1. Executive Summary

This report provides an assessment of Aboriginal Cultural Heritage (A.C.H.) located on Lots 1. and 2. DP1101540 and part of Closed Road 10/252287; immediately east of Lake Inverell Drive, Inverell.

The intent of this A.C.H. report is to formalise and build upon a Due Diligence Assessment that had been undertaken in May, 2018 by accredited Sites Officers who are also members of the Aboriginal Community through the Anaiwan Local Aboriginal Land Council (L.A.L.C.)

The Due Diligence assessment included both a field assessment (11<sup>th</sup> May) and data base search, on the day prior, of the Aboriginal Heritage Information Management System (A.H.I.M.S.) as managed by Office of Environment and Heritage (O.E.H.). While the A.H.I.M.S. search reported “no Aboriginal sites or places as being recorded in or near the location” the field assessment by the Anaiwan Sites Officers identified 8 stone artefacts at different locations on the proposed Off-Road Circuit. The presence of these artefacts initiated the need for this A.C.H. assessment.

While there was difficulty experienced in re-locating the artefacts as identified in the Due Diligence report, a field survey carried out for this A.C.H. assessment (7<sup>th</sup> November) located a further 9 artefacts or items of A.C.H. value to the Aboriginal community.

In the Due Diligence Report, author, Gregory Livermore (C.E.O. Anaiwan L.A.L.C) recommends that “Inverell Shire Council applies for an Aboriginal Heritage Impact Permit (A.H.I.P.) for the removal of the stone artefacts” and that they be “placed at an appropriate spot to be identified away from the development area and the location recorded and placed on the Aboriginal Heritage Information Management System.” This process of re-location “on Country” had unanimous support by members of the field survey team at an evaluation meeting held after the additional field assessment of 7<sup>th</sup> November.

Inverell Shire Council also intend to develop a boardwalk and kayak launch facility on the northern edge of Lake Inverell adjoining the current picnic area. Given the extremely disturbed nature of the area where these developments are to take place e.g. extensive construction work, in fill and historical

landscape work ongoing since 1937 it was resolved by members of the A.C.H. field survey team on the morning of the assessment that the presence of any items of A.C.H. value would be impossible to ascertain.

## 2. Acknowledgement

In undertaking this A.C.H. assessment the support and guidance by individual members of Anaiwan L.A.L.C. and Northern Tablelands Local Land Services (L.L.S.) has been invaluable. While both the Local Aboriginal Land Council and Local Land Services are identified bodies holding a vested interest under Section 80C (2) (a) of the National Parks and Wildlife Regulation 2009 their representatives who provided assistance with this ACH assessment are personally thanked.

From Anaiwan L.A.L.C; Gregory Livermore as C.E.O authored the original Due Diligence Report and undertook fieldwork with other Anaiwan representatives in the undertaking of that survey. Gregory also proof read the “Information for a Registered Aboriginal Party” and has always been available for further discussion and advice. Sites Officers, Vicky Duncan, Danny Johnson and Diane Marlow were involved in both the Due Diligence survey and the A.C.H. field assessment. Their enthusiasm and expertise is appreciated.

From Northern Tablelands Local Land Services, Harry White as both a local Elder and Senior Strategic Land Services Officer, Aboriginal Communities, has a wealth of knowledge gained in over 40 years of site works, which is applied through his day to day involvement, with Local Aboriginal Land Councils and property owners, concerning the protection of Aboriginal Cultural Heritage.

From Inverell Shire Council, the proponent of the Lake Inverell Off-Road Recreational Circuit, Anthony Alliston, Manager Development Services has been a strong advocate for Aboriginal community consultation and involvement in the project. He willingly partook in both field assessments and appreciated the opportunity to expand his knowledge of A.C.H working with local representatives.

My thanks to all involved.

### 3. Abbreviations

A.C.H – Aboriginal Cultural Heritage.

A.H.I.M.S. – (N.S.W.) Aboriginal Heritage Information Management System that exists as a searchable data base of recorded sites.

A.H.I.P. – Aboriginal Heritage Impact Permit. A document which may permit interference with Aboriginal sites and or places after complying with legislated process.

L.A.L.C. – Local Aboriginal Land Council. The organisation representing the local Aboriginal community – in this case Anaiwan.

L.L.S. – Local Land Services. A N.S.W. State Government organisation that delivers customer-focussed services to farmers, landholders and the community across rural and regional New South Wales. In this case Northern Tablelands.

O.E.H. – Office of Environment and Heritage. A Division of the N.S.W. State Government responsible for the care and protection of the environment and heritage, including natural environment, Aboriginal country, culture and heritage, and built heritage.

R.A.P – Registered Aboriginal Party. An organisation or individual that has a formal interest in a specific project.

## Table of Contents

Section	Page
1. Executive Summary	ii
2. Acknowledgement	iii
3. Abbreviations	iv
4. Background	7
5. Due Diligence	9
6. Scope and Objectives of Assessment	10
7. Site Location and Subject Area	12
8. Landscape Context	17
9. Aboriginal Community Consultation	18
10. Proposed ACH Assessment Methodology	20
11. Previous Archaeology & Predictive Modelling	22
12. Field Assessment	27
13. Field Survey Results	31
13a. Artefact Finds	32
14. Assessment, Significance and Recommendations	41
15. Plates	42
Bibliography	54
Appendix A Consultation Diary and Selected Copies of Correspondence	63
Appendix B AHIMS report – Due Diligence survey	75
Appendix C Glossary and Terminology	76
Appendix D A.H.I.P. Application	83

### Co-ordinates.

All co-ordinates are given as Map Grid Australia 1994 (MGA 94)

## List of Figures, Maps, Diagrams, Tables and Plates

Number	Figures	Page
1a.	General location of proposed development	7
1b.	Insert – slashed track “indicative” of proposed works	8
2	Site location	12
3	Extract of 1893 Parish Map	14
4	Extract of 1942 Parish Map	15
5	Field of works	21
6	Field assessment areas	30
	Tables	
1	Survey team members	18
2	Visibility across survey units	29
3	Artefact finds	31
	Plates	
1a – 9b	Artefact finds by individual	32-40
10	Landscape view	42
11	Survey team	43
12	Anaiwan Sites Officers on survey	44
13	Survey on red soil rib No. 1	45
14	Sites Officer Vicky Duncan on survey	46
15	Black soil track self mulching	47
16	Visibility on self mulching black soil	48
17	Visibility on mid slope chocolate soil	49
18	Upper bank black soil channel	50
19	Landscape red soil rib No. 2	51
20	Erosion gully looking upslope	52
21	Landscape red soil water channel No. 1	53

Scales: 2 scales exist in photographs.

The black and white check squares are 1cm x 1cm (10mm. x 10mm.) each with an overall scale length of 10cm. This scale was supplied by The International Federation of Rock Art Organisations (IFRAO) and also displays colour swatches for assessing rock art.

The red and white ranging pole has alternate colour sections of 20cm.

Fully extended it is 2m. long.



## 4. Background

Inverell Shire Council propose to construct an “off-road recreational circuit” on land east of Lake Inverell Drive, north of Lake Inverell (Macintyre River) approximately 3km south-east of Inverell Post Office. (see Figures 1a and b)

The intended use of the “off-road recreational circuit” is for community recreation and exercise; with “off road” meaning and being a safety feature removing the people and activity “off public roads”.

The area is currently Zoned as E3 Environmental Management upon which, among others, recreation and outdoor recreation facilities are permitted with consent.

Previous land use has been mixed grazing as a leasehold block comprised of several adjoining lots.

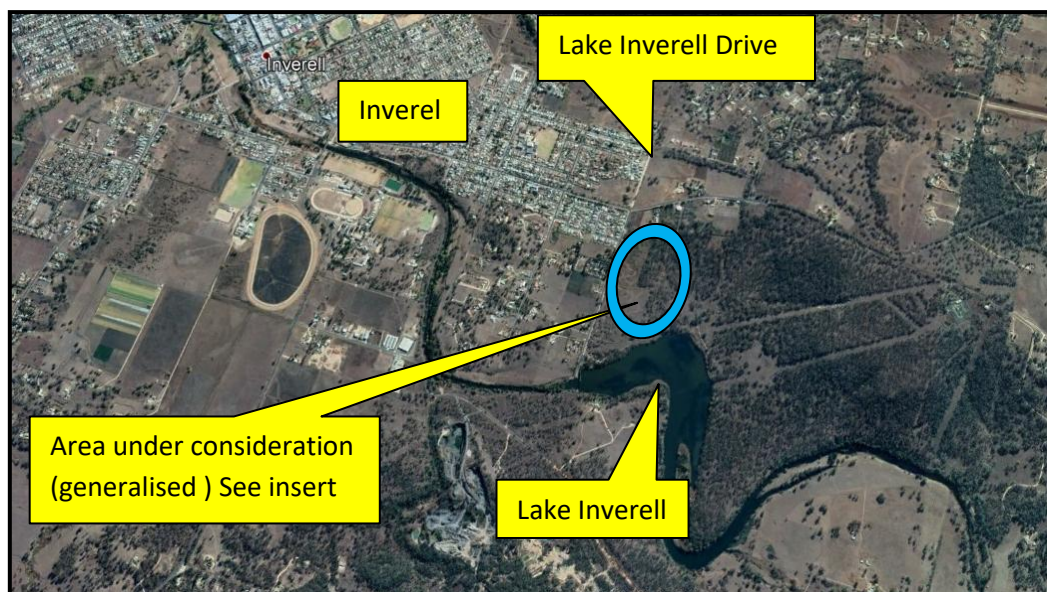


Figure 1a. General location of proposed development

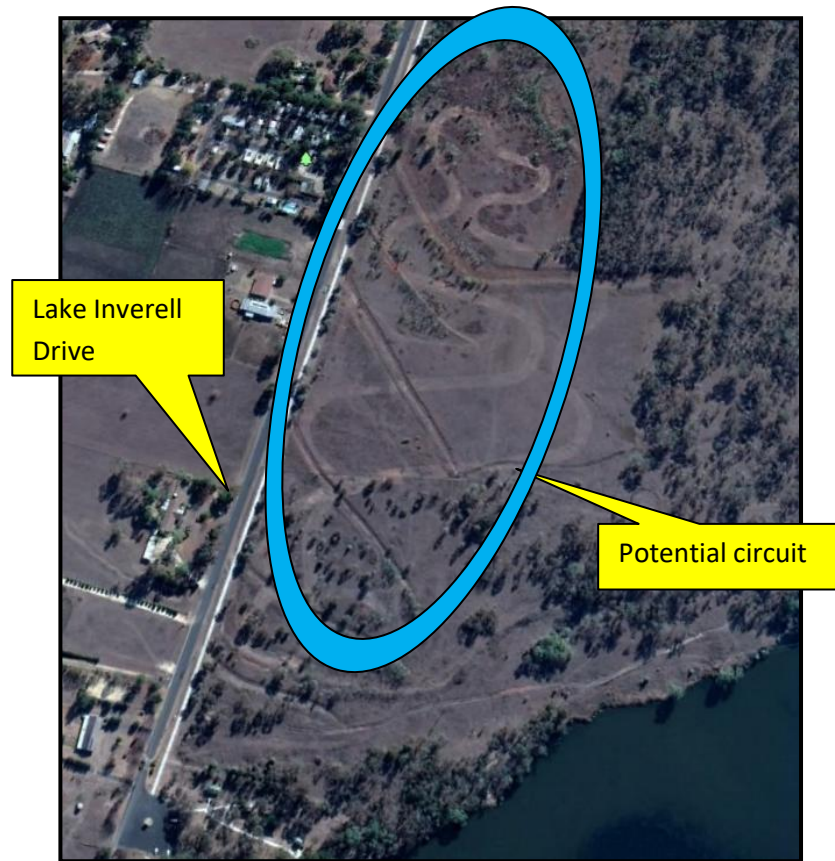


Figure 1b. Insert showing general location of proposed development relative to Lake Inverell Drive and Lake Inverell (Macintyre River)

Note the slashed track “indicative” of proposed development area prepared for Due Diligence assessment

(Sourced and designed from Google Earth (accessed 28<sup>th</sup> August, 2018))

## 5. Due Diligence

Inverell Shire Council approached Anaiwan LALC, upon whose traditional land the proposed development is located, to undertake a Due Diligence survey for the purpose of determining the presence of any items of Aboriginal A.C.H. significance.

This survey was conducted on the 11<sup>th</sup> May by four representatives of Anaiwan LALC; Greg Livermore (C.E.O) Daniel Johnson, Vicky Duncan and Dianne Marlow (Anaiwan Site Officers) in association with Anthony Alliston (Inverell Shire Council – Manager Development Services).

A member of the survey team, Diane Marlow, undertook a search of the OEH Aboriginal Heritage Information Management System on the day prior to the field survey. No Aboriginal sites or places were recorded. (Appendix B)

The Due Diligence survey identified 8 stone artefacts in various locations on the proposed project site and recommended “That Inverell Shire Council apply for an Aboriginal Heritage Impact Permit (AHIP) for the removal of the stone artefacts”. The report further recommended that the artefacts could be “relocated to an appropriate location away from the development area” (Greg Livermore unpublished report 11<sup>th</sup> May 2018) with the site registered on the Aboriginal Heritage Information Management System (AHIMS).

To facilitate an AHIP application an Aboriginal Cultural Heritage Assessment must be undertaken.

## 6. Scope and Objectives of Assessment

Tony Sonter of “Artefact and Aspect” was commissioned by Inverell Shire Council with the approval of Anaiwan LALC to undertake an ACH assessment of the proposed development site. The area to be assessed included the focus area originally assessed during the Due Diligence assessment but extended to establish a more extensive “field of works”.

Tony holds a Bachelor of Arts majoring in physical geography and Australian archaeology; a postgraduate Master of Letters with a dissertation on Aboriginal Art of the North-West Slopes of N.S.W; Postgraduate Diploma of Social Science majoring in geomorphology and prehistoric archaeology. Further studies towards a Postgraduate Diploma in Humanities have been undertaken in Australian History and historical archaeology.

He has worked on archaeological, education and heritage projects across north-west NSW since 2009.

Additionally he holds a Certificate IV in Assessment and Workplace Training and a Postgraduate Certificate of Education which he uses in education and training projects relative to Aboriginal Cultural Heritage.

The objectives of the ACH assessment are to follow on the already completed Due Diligence assessment and further investigate the potential presence of Aboriginal objects within the proposed development area.

Given that the Due Diligence Report has already noted the presence of Aboriginal objects in the potential development area the ACH assessment would be undertaken with the support of Registered Aboriginal Parties (R.A.P’s) and identify ways to avoid or minimise harm to those objects. Such action will most probably have the intention of applying for an Aboriginal Heritage Impact Permit (A.H.I.P.) to relocate the known artefacts and any additional artefacts that may be located. Given the ACH assessment and potential AHIP scenario a procedure in line with best practice, policy and legislation directly involving the Aboriginal community is a central objective.

Central to the Objectives the following regulations and guidelines either in full or by relevant section have been integral in consultation, field assessment and report compilation:

- Aboriginal cultural heritage consultation requirements for proponents 2010. NSW Department of Environment, Climate Change and Water. (DECCW) 2010.
- Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants. NSW Office Environment and Heritage. (O.E.H.) 2011.
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. NSW Department of Environment, Climate Change and Water. (DECCW) 2010.
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales. NSW Department of Environment, Climate Change and Water. (DECCW) 2010.
- Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales. NSW Office of Environment and Heritage (OEH) 2011.
- NSW National Parks and Wildlife Regulation 2009.



## 7. Site Location and Subject Area

The proposal is largely planned to exist on Lot 1. DP1101540 but also extends into the western edge of Lot 2. DP1101540 and includes part of Closed Road 10/252287. (See Figure 2).

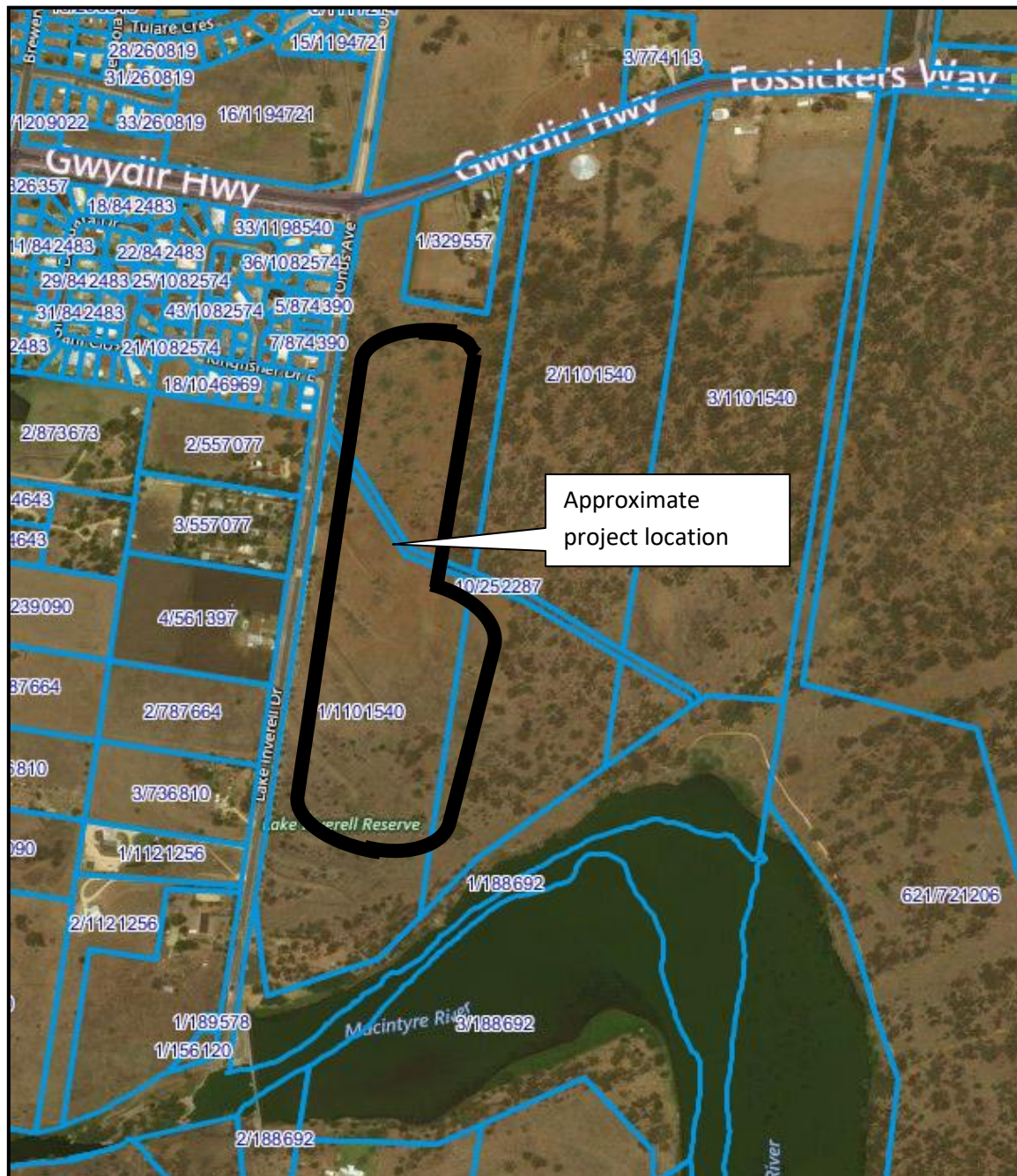


Figure 2. Extract Inverell Local Environment Plan (L.E.P.) 2012 showing approximate project location

Source: [www.maps.inverell.nsw.gov.au](http://www.maps.inverell.nsw.gov.au) (accessed 28<sup>th</sup> August 2018).



The area under ACH investigation is covered by both Lots 1 & 2 DP1101540 and Closed Road 10/252287. Currently Zoned as E3 Environmental Management upon which, among other uses, recreation and outdoor recreation facilities are permitted with consent. Both Lots are elongated rectangles running approximately north-south with the northern boundary adjoining The Gwydir Highway and the southern boundary being Lake Inverell foreshore. Lot 1 has a further sub division on the northern end being Lot 1/329557 - “Langunya”.

Lake Inverell was originally a town water reservoir, completed in 1939 with a dam wall constructed across the Macintyre River and associated infrastructure installed. Following years of resident agitation for a suitable site to provide a reliable town water supply several sites were suggested at different times in the early 1900’s. These included taking water from both the Macintyre and Gwydir Rivers. Eventually the present site of Lake Inverell was selected and served to supply Inverell Town Water until Copeton Dam on the Gwydir River became the source of Inverell town water. The present Lake Inverell site was generally known as “The Mathers Scheme”.

*“Mr. L Sonter was voted to the chair and in addressing the gathering stated he wished to speak of the site of what was known as the Mather Scheme.....”*

(Inverell Times Wednesday 23<sup>rd</sup> December 1936 page 2)

Thomas Mather had established a vineyard and associated infrastructure called “Roslyn” in the period 1870 – 1880 on the hill slope to the east of Inverell. This hill where the original “Roslyn” home still stands at the eastern “entrance” to Inverell became known as “Mathers Hill”.

In 1910 a visit by The Prime Minister of Australia (February) and the Governor General of New South Wales (August), confirm the status of Mathers Hill as the eastern entrance to Inverell. When the Prime Minister, The Honourable Alfred Deakin visited in February 1910 (Inverell Times, 18<sup>th</sup> Feb.) and later that year the Governor of New South Wales, The Right Honourable Viscount Chelmsford (Inverell Times 30<sup>th</sup> Aug) both official parties travelling west from Glen Innes were met at Mathers Hill by contingents of police and mounted Australian Light Horse for their formal “procession” into Inverell.

Indicative of the prowess of Thomas Mather as a leading vigneron was his award of £50 in 1892 for the “best managed vineyard in The Colony”.

(Freemasons Journal 18<sup>th</sup> June, 1892 quoted by Regan, 2013).

Winemaking at “Roslyn” had ceased by 1910 (see Wiedemann, 1981, pp. 139-142 and Whish, 1968, pp. 23-32 for a full discussion on wine and vineyards in the Inverell district) and the Mather family had vacated “Roslyn” by 1934 although extended family now occupied “Langunya”.

The 1893 Parish Map (County of Gough Parish of Inverell – cancelled April 1917) shows Thomas Mather originally owned Lot 3 DP1101540 (in 1893 identified as Lot 181) adjoining on the eastern side the present 2 lots under proposed development consideration, i.e. Lots 1 & 2 DP1101540 (identified as Lots 185 / 186 respectively). The Closed Road 10/252287 is notated on the 1893 Parish Map as “Sold to Thomas Mather”.

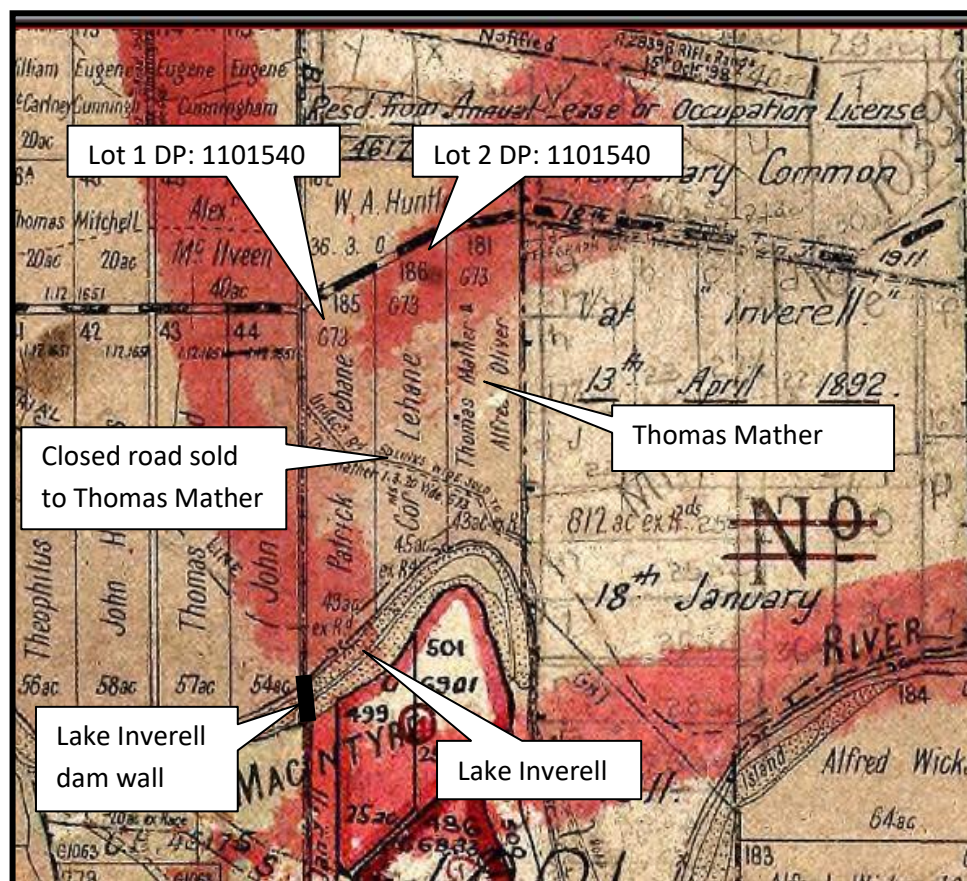


Figure 3. Extract of 1893 Parish Map (County of Gough Parish of Inverell) showing Mather land ownership with details of Lake Inverell superimposed.

(Source: [www.nswlrs.com.au](http://www.nswlrs.com.au) accessed 28<sup>th</sup> August 2018)



The actual site of the original potential dam wall of the "Mathers Scheme" water supply dam wall as discussed in the period 1902-1936 was 350m upstream of the actual present site. The present site was selected in 1935 to make use of the rocky bar across the river bed still evident exposed below the dam wall. In June 1937 a tender for £30,700 to construct the dam was signed and construction completed at the end of 1938 (Weideman, Inverell Times, April 18<sup>th</sup> 1980)

By 1942 the Parish Map now notes all 3 lots under discussion 181, 185 and 186 as "resumed for water supply", notified in the Government Gazette of 22<sup>nd</sup> July 1938.

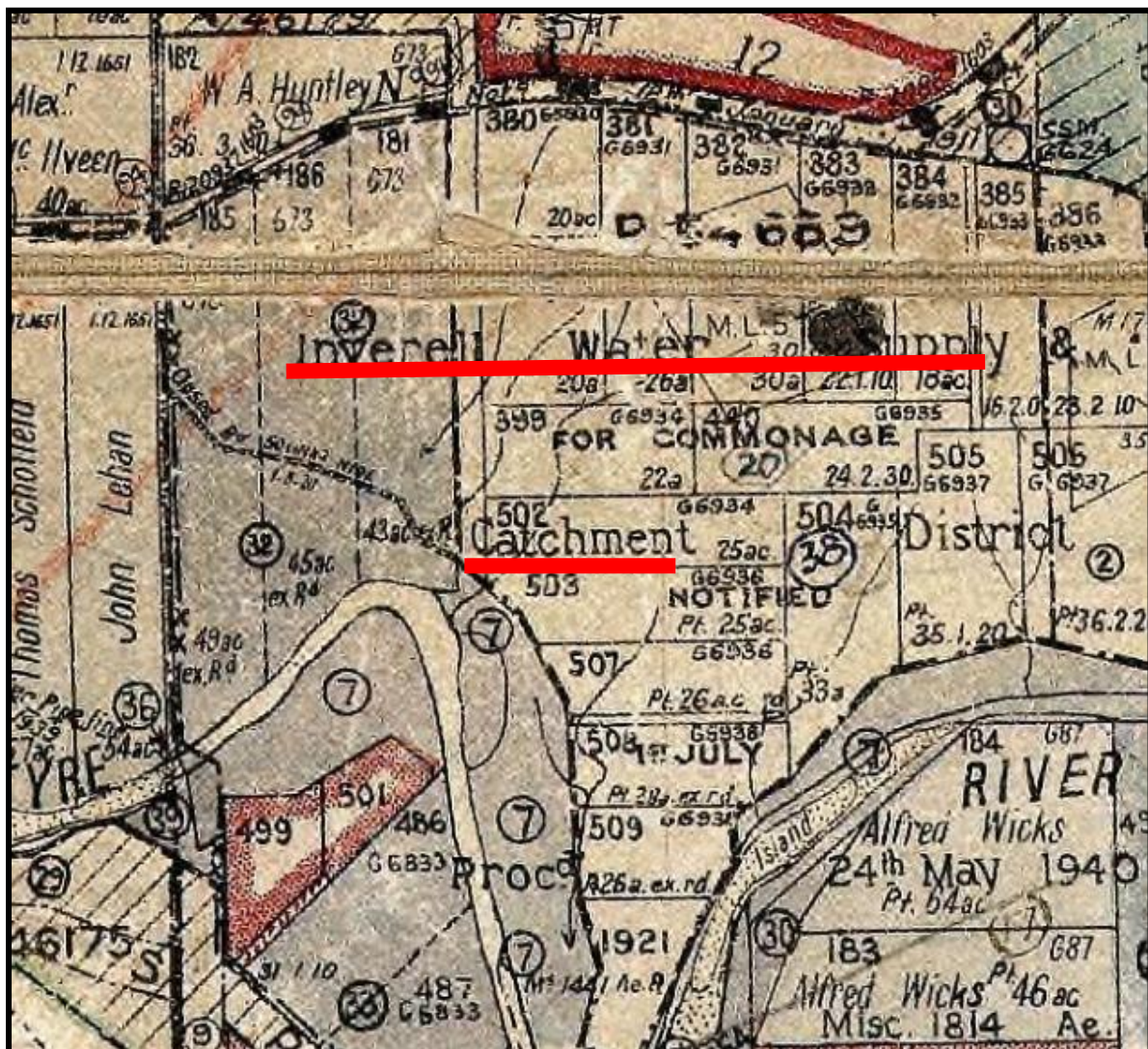


Figure 4. Extract of 1942 Parish Map (County of Gough Parish of Inverell) showing private land ownership of area under discussion as part of Inverell Water Supply Catchment.

(Source: [www.nswlrs.com.au](http://www.nswlrs.com.au) accessed 28<sup>th</sup> August 2018)

Elements that remain of this early vine cultivation within the Mathers Hill landscape, include extensive hedge lines of Osage Orange (*Maclura pomifera*) a favoured thorny hedge plant introduced by settlers and perhaps more explicitly vignerons into the Inverell district to stop stock from straying into their vineyards; to serve as wind breaks, to create “fencing” boundary markers and to stop pilfering of the “ready to pick” bunches given the location of “Roslyn” and other vineyards i.e. on the edges of the Inverell town boundary. (Pickard, 2006)

While outside the scope of this ACH assessment the remnant Osage orange hedges warrant further investigation as significant historic heritage items satisfying multiple criteria for retention and preservation using criteria of the NSW Heritage Office (2001). The remnant Osage orange hedges are highly significant historic heritage items satisfying multiple O.E.H. heritage criteria and could be assessed and considered of NSW state significance.

## 8. Landscape Context

The Lake Inverell Off-Road Recreational Circuit is proposed to be developed on an elongated south facing slope ranging some 25m. in local relief from approximately 640m. asl. in the north to 615mm. asl. in the south.

The slope has undergone various erosional processes and a significant gully has developed in the upper eastern area of the field of works. Across the slope a number of wide and deep channels have been constructed running obliquely across and down slope from west to east. While the intention of these channels is unknown they may have served to direct water away from Lake Inverell Drive and / or the picnic area immediately above the dam wall of Lake Inverell. The channels appear to disperse sheet water flow into an unnamed water channel on the western edge of Lot 2. DP1101540.

Vegetation on the proposed development area has been largely cleared with some wattle regrowth occurring with the absence of recent grazing by live stock. Grasses are clumped in their growth habit with most of the proposed development to be sited on the “cleared lower slope and wattle regrowth area” of Lot 1 DP1101540. (See Plate 10)

An area of eucalypt woodland in the north-east corner of the field of works will not be directly impacted upon for the proposed development.

Soils on the northern end of the development area tended to be red gravelly clay with some ironstone nodules found. Lower down the slope the catena changed to a more chocolate shade with typical heavy black basalt soils present on the lower southern edge. The high clay content of the self mulching black soil was evident on the lower slope with extensive cracks being present with ongoing drought conditions.

No rock exposures occur on the slope although red gravel ironstone nodules were present on the upper slope. The parent bedrock of the area is basalt as can be seen below the dam wall.

## 9. Aboriginal Community Consultation.

Consultation with Aboriginal communities regarding the proposed Lake Inverell Off Road Recreational Circuit has been undertaken in accordance with the Consultation Requirement document as published by NSW Department of Environment, Climate Change and Water. (DECCW) April, 2010. “*Aboriginal cultural heritage consultation requirements for proponents 2010.*” and the requirements of Clause 80C of the National Parks and Wildlife Regulation 2009.

The aim of consultation is to ensure Registered Aboriginal Parties (R.A.Ps) have information and familiarity about the development proposal to make decisions on Aboriginal cultural heritage with respect to the proposed development and to potentially contribute additional cultural knowledge to any Aboriginal Cultural Heritage assessment.

The consultation process is fully documented as Appendix A.

Two Registered Aboriginal Parties (R.A.Ps), Mr Harry White and Anaiwan Local Aboriginal Land Council were integral to the undertaking of the assessment process. (See summary table 1)

Name	Title	Organisation
Harry White#	Senior Strategic Land Services Officer, Aboriginal Communities	Northern Tablelands Local Land Services (L.L.S.)
Greg Livermore*	CEO & Author of original Due Diligence Report	Anaiwan Local Aboriginal Land Council. (L.A.L.C.)
Vicky Duncan*#	Sites Officer	
Danny Johnson*#	Sites Officer	
Di Marlow*#	Sites Officer	
* Indicates undertook original Due Diligence assessment		
# Indicates undertook ACH assessment		

Table 1. Survey team Members



In undertaking the consultation process the following summary outlines major events.

a) Letters were forwarded to the nominated bodies as outlined in:  
80C the National Parks and Wildlife Regulation 2009. (2) (a)  
and / or  
Aboriginal cultural heritage consultation requirements for proponents 2010.  
4.1.2

seeking the names of Aboriginal people who may hold knowledge relevant to the proposed development area.

b) Responses were:

- i) 3 individual persons – Mr Craig Archibald, Mr Aaron Broad and Mr Raymond Weatherall,
- ii) Anaiwan LALC – acknowledged themselves as having a Registered Interest plus they were the organisation deferred to by both Registrar Aboriginal Land Rights, Inverell Shire Council and Northern Tablelands Local Land Services
- iii) Gomeroi People - 1 contact made – Mr. Raymond Weatherall
- vi) Mr Harry White of Northern Tablelands Local Land Services also maintained a registered interest.
- c) Contact was attempted via Registered Mail regarding Registration as an Aboriginal Party (R.A.P.). Of the 3 individuals only Mr Raymond Weatherall responded. He was forwarded information for Registration as an Aboriginal Party by both email and registered mail but chose not to respond / partake. Communication with the other 2 potential respondents was returned “unknown / left address”
- d) Contact continued throughout the assessment process with Anaiwan LALC and Harry White NTLLS.

Summary of Consultation: The 2 active Registered Parties; Anaiwan LALC through CEO; Greg Livermore and Harry White of Northern Tableland LLS maintained an active role throughout the course of the assessment. They provided advice, comment and input into planning, field work and document writing and editing. As representatives their final statements in support of an AHIP can be found as Appendices A. 3 & 4.

## 10. Proposed A.C.H. Assessment Methodology.

Given that the Due Diligence survey had already revealed the existence of objects of Aboriginal Cultural Heritage on the actual proposed circuit it is intended to widen the area to be assessed to include a potential “field of works” that may be impacted upon during the project construction.

In consultation with Anthony Alliston (Inverell Shire Council – Manager Development Services 26<sup>th</sup> September, 2018) this field of works has been identified as an area of approximately 20 hectares, lying largely south west of a nominal corner point E320413; N6703725 – see Figure 5.

As a component of the Aboriginal Cultural Heritage assessment a further field survey was undertaken. This survey was conducted in a boustrophedon manner using the same representatives of the Anaiwan LALC who undertook the original Due Diligence survey.

Limitations to such a survey include visibility noting that the track area prior to the Due Diligence survey had been slashed. (Greg Livermore page 2 / Figure 1b. this report)

It should also be noted that while the southern boundary of the area to be surveyed is currently within 200m of water, “a landscape feature that (may) indicate the likely existence of Aboriginal objects” (Due Diligence – September, 2010 page 12) this association is through the artificial raising of the water level by the damming of the Macintyre River to create Lake Inverell.

The north east “corner” of the initial survey area was not surveyed as visibility in the woodland was basically zero given the large amount of leaf litter present. This woodland area is not intended to be in the actual off-road circuit area. (See Figure 2)

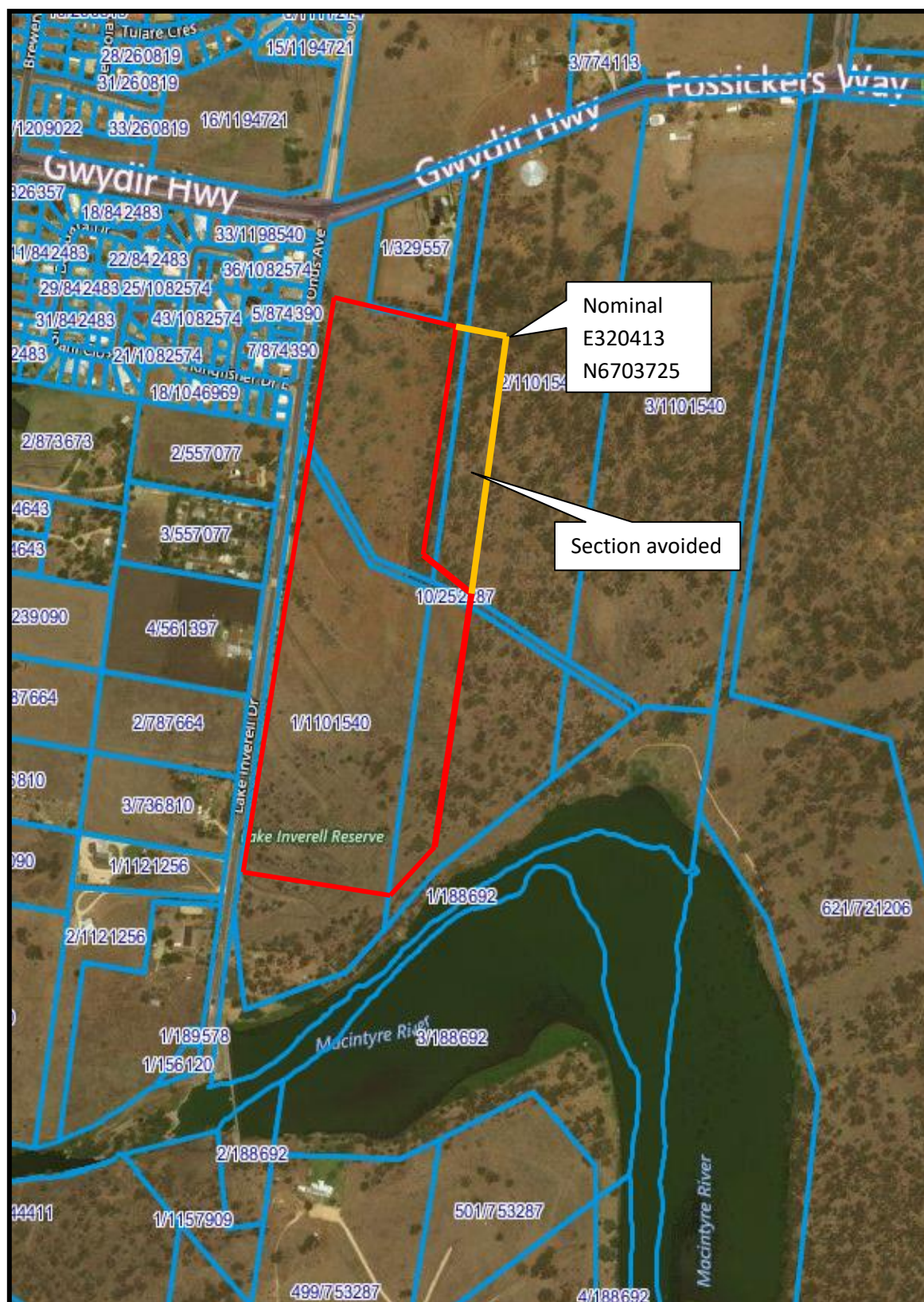


Figure 5. Nominal "field of works" to be surveyed

## 11. Previous Archaeology and predictive modelling.

An AHIMS search was conducted by Diane Marlow on 10<sup>th</sup> May, 2018 as part of the Due Diligence study to examine the possible existence of previously recorded Aboriginal Cultural Heritage Sites within the study area.

No sites were recorded.

Professional experience of Inverell regional archaeology recalls additional reports that fall into the area of *“local knowledge and other sources”* relevant to the study area.

During the 1960’s (and perhaps earlier) a Mrs Muriel Baldwin and her mother, residents of Gilgai, 10kms south of Inverell, had been collectors of ACH material across the Inverell regional area. Most of this material had been collected from surface sites and a large amount had been forwarded on to The Australian Museum.

In September, 1970, Valerie Campbell on behalf of the National Parks and Wildlife Service (NSW – NPWS) interviewed Mrs Baldwin and attempted to correlate the collected material with site locations etc. This resulted in a NPWS document; “Report on Aboriginal Sites in Inverell District Located by Mrs Baldwin of Gilgai” (Valerie Campbell, NPWS Report C-199, 1/9/1970).

In September, 2009 the Australian Museum (Business Services) published a report on Goonoowigall State Conservation Area and Barayamal National Park. Goonoowigall State Conservation Area is immediately south of the proposed off-road circuit development project; “over the Macintyre River” and Barayamal National Park adjoins Lake Inverell Reserve on the eastern edge of Lot 3 DP 1101540.

The Australian Museum report features a number of artefacts, largely flakes, collected by Mrs Baldwin as isolated surface finds from Goonoowigall and held by the Australian Museum. (pp. 18-20). Many of the surface finds illustrated in the report appear similar to the surface finds found in fieldwork associated with this ACH assessment. This is also the case for Goonoowigall surface finds

collected by Mrs Baldwin and displayed at the local Inverell “museum”, Pioneer Village.

Working extensively across the New England Tablelands in the 1960’s, Isobel McBryde published her landmark study “Aboriginal Prehistory in New England” in 1974. Her major investigations in the Inverell area were located north-west of Inverell on Ottleys Creek, a tributary of the Macintyre River, where she examined numerous sandstone overhangs analysing rock art and excavated several trenches in shelters where Aboriginal occupation spanned at least 9000 years. (Beck. 2006, p.93)

This area north-west of Inverell also attracted further archaeological attention from Philip Boot (1987-1990) and June Ross (1997).

Boot re-examined much of McBrydes excavated material looking for use wear and residue analysis and complemented McBrydes material with some new excavations at the Ottley Creek complex.

Ross examined art sites to the north of Ottleys Creek, on Simpsons Creek, another tributary of the Macintyre River. Using art style and motif she suggested that the art found along both Ottleys and Simpsons Creek may form a cohesive body of similar art.

The landscape areas assessed by McBryde, Boot and Ross while all being on tributaries of the Macintyre River differ significantly from the landscape of the slope upon which the Lake Inverell off-road circuit is proposed. Ottleys and Simpsons Creek both exist with narrow valley floors where the creek has eroded through the overlying basalt flows to expose the softer Warialda sandstone beds underneath. These sandstone beds in turn have produced numerous caves that became occupation sites.

A catchment wide study of Aboriginal Cultural Heritage of the Macintyre Valley was undertaken by Michael Pearson in 1973 as a component of his Bachelor of Arts honours course. In this unpublished thesis Pearson cites extensive ethnohistory accounts to document and summarise aspects of Aboriginal traditional lifestyle as evident at the “contact” period. He also recorded a number of sites from wide ranging fieldwork with many surface finds being attributed to “Mrs Baldwin”



Like many areas across Australia most archaeological fieldwork of the last 25 years has been the work of consultant archaeologists examining selected areas of the landscape in response to assessing the impact of a proposed development on elements of Aboriginal Cultural Heritage (ACH). A report of relevance to this project is AHIMS No. 4387

- . *An Archaeological survey for the Proposed Optic Fibre Cable Route between Inverell and Bakkulla (sic) northern NSW. Conducted by Kelton, Central West Archaeology and Heritage Services Pty. Ltd. 1/12/1997”*

Kelton (1997) examined an area immediately to the north of Inverell. While outside the area of this project he did locate and record an isolated but extensive scattered artefact site.

Kelton based a predictive model for the presence of Aboriginal Cultural Heritage sites on earlier work by Pearson (1981) that identified the following criteria as highly likely to predetermine the presence of sites:

- Accessibility to water
- Well drained level ground
- Elevation above cold air current and frost prone valley
- Good view of river flat and water source
- Sheltered from cold winter wind but with exposure to summer cooling breeze
- Adequate fuel supply

(Kelton, 1997, pp12-13)

Of these criteria the The Due Diligence Code of Practice (2010 p.12) emphasises that the particular landscape features most likely to have Aboriginal objects associated or located in or with them is if they are on undisturbed land within 200m of water.

Appleton, produced a survey strategy for predicting the location of surface archaeological material in areas of the Western Slopes of NSW (1990 p.1) Appleton concluded that stone artefacts will be distributed across the landscape in variable densities with the highest densities adjacent to creeks containing permanent water (wet creeks) and on ridges of the red brown soils

that dominate the lower slopes. Most artefacts will be observable when ground cover is less than 10% (1990, pp.164-165)

The likely presence of artefacts close to a more permanent water source on the red brown slopes is confirmed by those artefacts recorded during the May, 2018 Due Diligence process of this development.

A large variety of different Aboriginal cultural heritage site types are defined by Department Environment Climate Change and Water (DECCW). The use of the term “site type” is similar to the use of the word “object” as defined in the National Parks and Wildlife Act (1974 No. 80 Part 1 Section 5 Definitions) as:

*“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”*

These include but are not restricted to (as listed in and adapted from Due Diligence Code of Practice, 2010. p.16 Section 11.3 What is an Aboriginal object?)

- Burials that still exhibit “grave form” and/or skeletal remains
- Aboriginal culturally modified trees that may be scarred from ceremonial use, resource exploitation or artefact manufacture.
- Middens as containing shell / bone/ organic material
- Rock art on overhangs / caves either as painted or engraved
- Isolated stone artefacts and stone artefact scatters.

These items of Aboriginal Cultural Heritage are the most likely artefacts to be encountered in any field assessment. Central to the identification of artefacts is evidence of human modification which is usually in the form of flaking and or grinding.

- Raised earth rings usually known as bora rings / circles
- Axe grinding grooves
- Rock overhangs / shelter / camp sites
- Earth mounds
- Fire hearths often in association with artefact scatters as an open camp site

- Stone arrangements usually interpreted as a ceremonial site

The following are additional site types that are known to be part of the Aboriginal cultural landscape but are not specifically referred to in the Due Diligence List (2010. p.16)

- Quarry sites for stone / ochre procurement
- Stone fish traps
- Potential Archaeological Deposit (PAD) which represents a site that may not exhibit surface occupation evidence but does have potential for the evidence to exist below the surface.
- Contact sites
- Cultural sites / dreaming sites of significance as interpreted from the natural landscape.

This list is similar and comparable to those listed on the “Office of Environment and Heritage (NSW) NPWS Aboriginal Site Recording Form”

The predictive model for this study is based on a number of variables that include:

- The Due Diligence study already undertaken
- A review of previous studies and archaeological reports.
- Site familiarisation visits during September, 2018.

In summary – The development area has the potential to continue to reveal isolated artefacts and vegetation cover will be a major factor in determining site visibility.

Areas of concentrated assessment were deemed to be:

- the erosion gully on the eastern edge of Lot 1 DP 1101540
- the water diversion channels running obliquely across Lot 1 DP 110540

These were to be investigated by undertaking a series of boustrophedon transect sweeps. Sampling was conducted as recommended by Burke and Smith in their procedural statement “Systematic Surface Survey and Sampling” (2004 pp.65-69).

## 12. Field Assessment

Field assessment was undertaken on Wednesday, 7<sup>th</sup> November. The field survey team consisted of:

- Harry White – A representative of the Northern Tablelands Local Land Services, one of the mandatory organisations to be contacted re consultation, but himself a community elder and Registered Aboriginal Person (R.A.P.)
- Vicky Duncan – A representative of Anaiwan LALC but herself a private Aboriginal Sites Officer operating as Aboriginal Cultural Sites Services.
- Danny Johnson – A representative of Anaiwan LALC and a qualified Aboriginal Sites Officer.
- Diane Marlow – A representative of Anaiwan LALC but herself a private Aboriginal Sites Officer operating as Aboriginal Cultural Sites Services.
- Anthony Alliston – Manager Development Services Inverell Shire Council
- Apologies were received from Greg Livermore CEO of Anaiwan LALC; a qualified sites officer & author of original Due Diligence Report

(See Plate 11)

Conditions were fine and clear at 8am but became more overcast as the morning progressed. The survey was complete by 11.30am and an evaluation meeting followed. Wind driven rain scuds occurred later that afternoon.

During preliminary visits to the site in September the author was unable to re-locate the artefacts as documented in the original Due Diligence report. This problem was addressed at the beginning of the field assessment.

Of the 8 recorded artefacts in the Due Diligence report:

- 2 had GPS references that located them on the proposed development site
- 2 had GPS references that either contained too many or insufficient numerals in their references
- 4 had GPS references that located them off site

Given that it was 6 months since they had undertaken the Due Diligence report the Sites Officers were unable to relocate, by memory, any of the 8 recorded artefacts. It was commented that several of the artefacts were “very small” and given changes to the landscape over time they may have been dislodged

by animal activity; covered by vegetation or “swallowed” by the self mulching black soil.

Noting the problems experienced recording artefact location by GPS during the Due Diligence process, before this field assessment began 2 GPS units were calibrated and used to record locations for cross checking by independent operators (myself and Harry White). Location readings on the GPS units were then compared before recording the location of each artefact. My thanks to Harry for recording the locations given in the Artefact Finds (Section 13b.)

With visibility as a major inhibitor to potential artefact exposure the field survey was largely targeted and undertaken along:

- The oblique water diversion channels – where the edge slopes and lip rims of the black soil channels offered 50% visibility while red soil channel No. 1 offered 90% visibility across a width of 30-40m. and channel No. 2 offered 70% visibility across a width of 20-30m.
- The red soil track on the northern end of the development area with visibility of 90% across a width of 5-7m.
- An erosion gully that ran basically north-south on the eastern edge of Lot 1 DP 1101540 that offered 90% visibility across a width of 30-40m.
- A black soil track on the southern section of the development area that offered 60% visibility across a width of 3-4m

Moving between “target” areas the survey team continued to sweep in a manner that was observant but constrained by vegetation creating reduced visibility. (Plates 16/17)



Survey unit	Length covered	Width surveyed in metres*	Visibility %	Effective coverage m <sup>2</sup> average*
Black soil water diversion channels x 4 (Plate 18)	480m	3-4m	50%	840m <sup>2</sup>
Red soil channel No. 1 (Plates 13/14/21)	100m	30-40m	90%	3150m <sup>2</sup>
Red soil channel No. 2 (Plate 19)	220m	20-30m	70%	3850m <sup>2</sup>
Red soil track (Plate 12)	70m	5-7m	90%	378m <sup>2</sup>
Black soil track (Plate 15)	120m	3-4m	60%	252m <sup>2</sup>
Erosion gully (Plates 10/20)	180m	30-40m	90%	5670m <sup>2</sup>
Total				14140m <sup>2</sup>
*Given that sections were variable in width effective coverage is expressed using an average width figure.				

Table 2. Visibility and surface coverage by units surveyed

There was no variation in the landscape units to be surveyed i.e. all the area existed on the same south facing slope therefore the visibility table expresses variation within targeted sub sections of that slope.

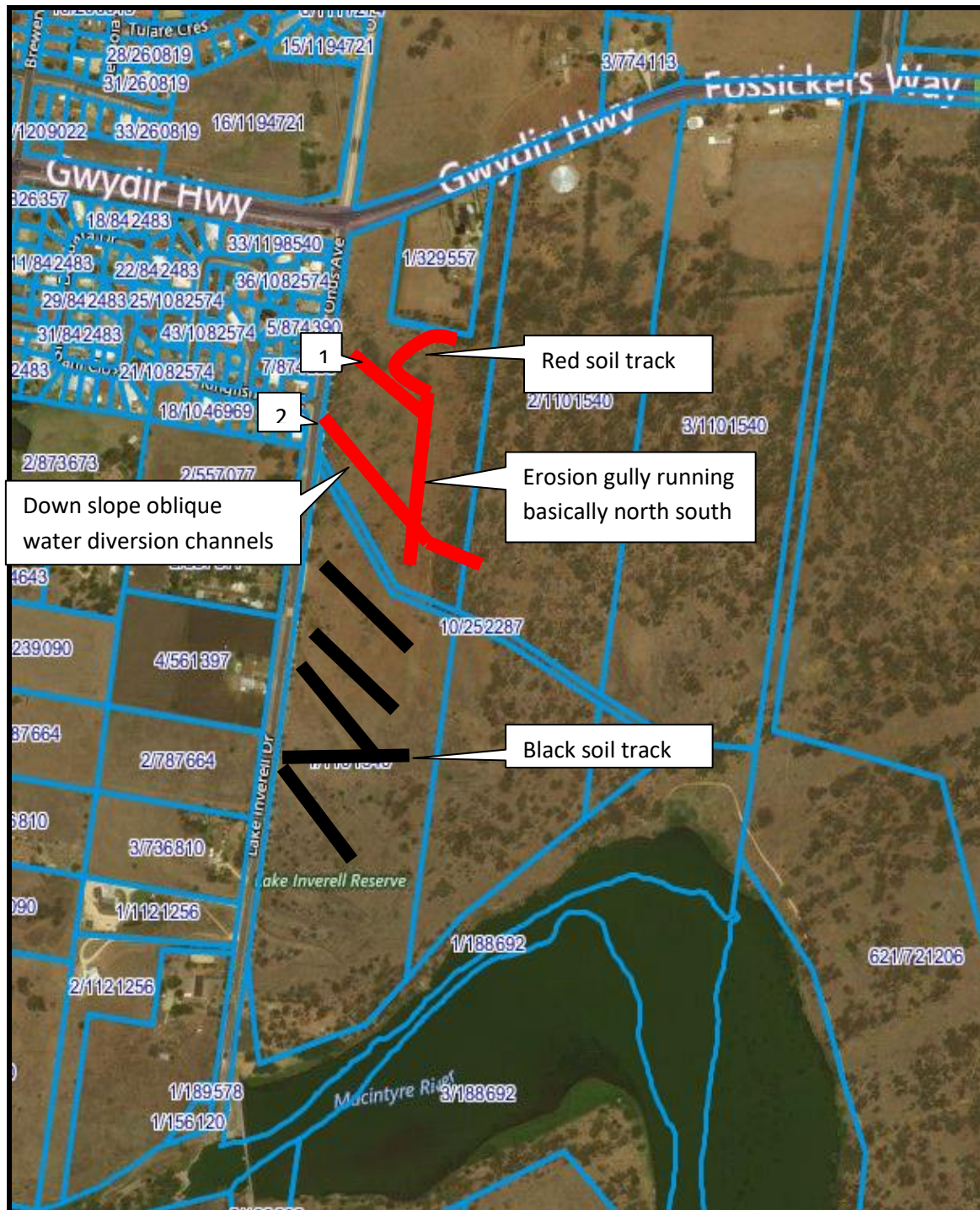


Figure 6. Field assessment areas. Target areas included the erosion gully running north south; a series of "rib" water diversion channels largely on the western side of the erosion gully, a black soil track running along a fence line on the lower southern slope and a short section of red soil track above the erosion gully.

Red areas indicate red soil sections where visibility was better. Black sections indicate black soil where visibility was not as clear.

## 13. Field Survey Results

Nine isolated artefacts or small scatter sites were recorded during the survey. They are presented in detail in the following Artefact Finds Table. Numbers allocated to the finds indicate a transect of their occurrence down the slope with No. 1 being on the northern end and No. 9 being on the southern end of the slope.

Finds included a variety of flakes, possible cores and “flakes out of context”. Eight of the nine finds were found basically in a north-south alignment beginning at the northern end where the red soil track met the oblique red soil diversion channel No. 1 and then extending down the slope within the erosion gully. Their exposure is therefore highly likely to be attributable to the erosion process of gully formation. One isolated artefact, No. 9, was found on the black soil track at the lower end of the slope.

All were readily identified by the survey team as being “out of context” with local rock type and of probable ACH origin. Many appear similar to those featured in the 2009 Goonoowigal report from the Australian Museum.

Similarly the survey finds are similar to material on display at Pioneer Village collected by Mrs Baldwin from Goonoowigal in the 1960’s.

Artefact type	No. allocated	Comment
Flake	1,4,7	These flakes displayed at least one distinctive feature such as a bulb of percussion leading to their classification as a flake
Flake / possible core	2, 6	These pieces displayed either multiple negative flake scars and / or bulb of percussion with possible use as a core
Core	8	Unusual pyramid shape formed by flake removal
Unidentified	5	No obvious evidence of being worked, however, sites officers believed their existence “out of context” indicated they were artefacts
Glass	3	This artefact identified by Sites Officers as out of context displayed numerous areas of edge flaking. Harrison (2004 pp. 172-178) provides an extensive discussion on the use of glass by Aboriginal people from early colonial times to 1960’s / 70’s. The presence of glass in the assemblage is not unusual

Table 3. Artefact finds table



### 13a. Artefact finds:

Numbers allocated to artefacts are for convenience, however the numbers do follow a position on the slope with No. 1 being found on the upper slope with No. 9 being found on the lower end of the slope.

1.

GPS / Alt.	Artefact and site type	Size	Description
E0320217 N6703606 637m.	Isolated flake	28mm x 22mm x 3mm	Whitish flaked piece geologically out of context exposed on upper slope in water drainage diversion channel.



Plate 1a. Flake in drainage channel



Plate 1b Orange stain from high iron content soil

2.

GPS / Alt.	Artefact and site type	Size	Description
E0320213 N6703532  633m asl.	Flake – possible core piece	62mm x 38mm. x 18mm.	Cherty type material with multiple negative flake scars and bulb of percussion



Plate 2a. Artefact on top of vegetation from possible down slope movement    Plate 2b. Showing negative flake scars



3.

GPS / Alt.	Artefact and site type	Size	Description
E0320204 N6703493  632m asl.	Core / modified artefact in close association with Core and flakes (no. 4) Item located out of context as material of European heritage	62mm x 52mm x 16mm. Glass thick at 16mm indicates some age, suggested origin from the flat side of a bottle. Flat unmodified surface on “A” side 55mm x 32mm; “B” side 42mm x 30mm.	Identified by Anaiwan sites officers as an artefact. Multiple erailures and bulbs of percussion noted. Margins have bifacial flaking suggesting intentional modification. Flakes removed may have been utilised? Possible evidence of retouch or stepped use fracture – core itself may have been utilised as a tool?



Plate 3a. As observed in the field by Anaiwan Sites Officer



Plate 3b. Multiple flakes removed



4.

GPS / Alt.	Artefact and site type	Size	Description
E0320222 N6706488  632m. asl.	Artefact scatter site. 1 artefact possible core with negative flake scar. 2 x flakes. Located in close association with No. 3 and No. 5.	Core 30mm x 30mm x 15mm. Flakes: 12mm x 6mm x 2mm 32mm x 30mm x 4mm	Potential core of crystalline quartz. Both flakes of quartz not as crystalline as potential core. Larger flake has broken transverse point. Exposed as surface find in erosion gully



Plate 4a. As exposed in erosion gully.



Plate 4b. Note transverse break across larger flake

5.

GPS / Alt.	Artefact and site type	Size	Description
E0320209 N6703463  630m. asl.	Identified as 3 x flakes. Located in close association with No. 3 and No. 4.	Larger flake 32mm x 21mm x 4mm. 2 smaller flakes very similar at 24mm x 12mm x 3mm.	Identified by Anaiwan sites officers as flakes. No retouch or obvious rework.



Plate 5a. As exposed in erosion gully



Plate 5b. No work or retouch evident



6.

GPS / Alt.	Artefact and site type	Size	Description
E0320206 N6703402  626m. asl.	Block shaped core	40mm. x 33mm. x 25mm.	Brown silcrete like material with 2 negative flake scars.



Plate 6a. Brown silcrete material out of context for local geology



Plate 6b. Block shape with 2 negative flake scars

7.

GPS / Alt.	Artefact and site type	Size	Description
E0320205 N6703357  624m. asl.	Elongated flake	30mm. x 15mm. x 3mm.	Distinctive light brown “cherty” type fine grained material. Clear bulb of percussion and negative flake scar



Plate 7a. Artefact well embedded in soil



Plate 7b. showing elongated negative flake scar



8.

GPS / Alt.	Artefact and site type	Size	Description
E0320173 N6703319  622m. asl.	Small core remnant	40mm. x 36mm. x 18mm.	Artefact sitting on top of vegetation – moved down slope probably by action of water or animal. Large cortex area - pyramid shaped. Bulb of percussion on proximal end. Small striking platform present.



Plate 8a. Artefact on top of vegetation reflecting down slope movement    Plate 8b. Pyramid shape with radiating negative flake scars



9.

GPS / Alt.	Artefact and site type	Size	Description
E0320165 N6703228  621m. asl.	Flake displaying negative flake scars – possible blade suggested by Anaiwan sites officers.	35mm x 20mm x 14mm.	Fine grained grey siliceous material. 2 distinct elongated negative flake scars



Plate 9a. Elongated flake of fine grained siliceous material



Plate 9b. Detail of negative flake scar

## 14. Assessment, significance & recommendations.

The finding of artefacts across the landscape of the survey area reinforces the association of Aboriginal people across the wider Macintyre catchment. While the Anaiwan LALC is unaware of any known association through living areas or former camps in the vicinity of the survey area (Livermore, 2018 p.5) that would support an ongoing social or historic connection, the obvious presence of artefacts requires further action.

At the conclusion of the Due Diligence survey it was recommended that the artefacts be removed to a suitable site "away from the development area". While a number of different artefacts were located during this ACH assessment the desire to relocate the artefacts was again supported by the Anaiwan Sites Officers at the evaluation that followed the 7<sup>th</sup>. November field survey.

In recognition of their cultural value and contribution to the overall archaeological "picture" of Aboriginal settlement in the Macintyre catchment their location should then be recorded on AHIMS and the relocation procedure compliant with Requirement 26 of the "Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales".

Given the pending relocation no registration of individual artefacts has yet been completed. Such relocation should be undertaken by due process of an AHIP application and supervised by members of Anaiwan LALC to a site of their choosing. For convenience in collecting and relocation in addition to G.P.S. readings artefact location has been marked by fluorescent flagging.

Inverell Shire Council should make all employees and contractors aware of the potential for additional artefact material to be uncovered during the development phase of the project. To this end all employees and contractors should be educated in identifying ACH material and should any be uncovered then through consultation with Anaiwan LALC additional finds could be deposited with the original artefacts and the AHIMS bases updated.

## 15. Plates.



Plate 10. Landscape view looking south over general proposed development area. Centre of foreground is erosion gully tapering from exposed red soil into chocolate. Note how density of vegetation cover increases on lower section of slope of proposed development area.





Plate 11. Full survey team. (Left to right) Diane Marlow (Anaiwan LALC), Vicky Duncan (Anaiwan LALC), Anthony Alliston (Inverell S.C.), Harry White (Northern Tablelands LLS), Danny Johnson (Anaiwan LALC).

Survey team have just finished walking the black soil track (left of photo) that runs horizontal on the lower slope of proposed development area.



Plate 12 Anaiwan Sites Officers, Danny Johnson and Vicky Duncan on the red soil track at the northern end of survey area. Visibility approximately 90%; width varied between 5-7m.





Plate13. Field survey members walking east on the northern most “rib” (No. 1 Figure 6) water diversion channel. Note the good surface visibility within the channel calculated at 90%.



Plate 14. Survey team member, Vicky Duncan closely examines a potential artefact on the northern most water channel rib (No. 1 Figure 6).





Plate 15. Surface visibility example on black soil track running across southern slope area of potential development area. While visibility was good, estimated at 60% across the track width of 3-4m, the cracking self mulching nature of the black clay soil also has the potential to “swallow” artefacts.





Plate 16. General visibility of 40% on lower southern section of survey area. Note the the cracking self mulching nature of the black clay soil that also has the potential to “swallow” artefacts.





Plate 17. General visibility of 60 - 70% on middle section of survey area – a chocolate soil transition zone between the upper slope red gravelly soil and lower slope black cracking clay.





Plate 18. Example of visibility on upper bank lip of water diversion channel. This example is immediately above the black soil track in the southern section of lower slope. Visibility on upper slope banks was approximately 50%. Slope bank 3-4m wide.





Plate 19. Example of visibility within red soil water diversion channel (No. 2 Figure 6). Photo taken looking west from intersection with erosion gully. Visibility calculated at 70%.



Plate 20. Upslope view of erosion gully showing 90% visibility. Pink flags indicating potential artefacts requiring further investigation by survey team. Photo taken looking north from intersection with water channel No.2.





Plate 21. Looking west along water channel No. 1. Showing 90% visibility. Photo taken from intersection with northern upper section of erosion gully. Red soil track leads off through vegetation break, right mid ground.

## Bibliography.

Appleton, J. 1990. A Survey Strategy for the Western Slopes – The Development of a Survey Technique and a Predictive Model for the Western Slopes of Northern NSW. Unpublished B.A. Hons. Thesis. UNE. Armadale

Australian Museum Business Services. 2009. Goonoowigall State Conservation Area and Baraymal National Park: Historic Heritage Assessment. Published by AMBS 6 College St. Sydney.

Beck, W. 2006 Aboriginal Archaeology in Atkinson, A. Ryan, J.S. Davidson, I. Piper, A. (Editors) High Lean Country Land, People and Memory in New England. Allen and Unwin.

Boot, P. 1990. Archaeology at Graman Sites B1 and B4. Unpublished Report to Moree Local Aboriginal Land Council.

Burke, H & Smith, C. 2004. The Archaeologists Field Handbook. Allen & Unwin. Crows Nest NSW.

Campbell, V. Report on Aboriginal Sites in Inverell District Located by Mrs Baldwin of Gilgai. NPWS Report C-199, 1/9/1970.

Harrison, R. 2004. Shared Landscapes. Studies in the Cultural Construction of Open Space. University of New South Wales Press.

Kelton, J. 1997. An Archaeological Survey for the Proposed Optic Fibre Cable Route Between Inverell and Bakkulla (sic), Northern NSW. Unpublished report 04387 NSW Office of Environment and Heritage.

Livermore, G. 2018. Lake Inverell Off-Road Recreational Circuit – Due Diligence Aboriginal Cultural Heritage Assessment – 11<sup>th</sup> May 2018. Unpublished report to Inverell Shire Council.

McBryde, I. 1974. Aboriginal Prehistory in New England. Sydney University Press. Sydney



NSW Office Environment and Heritage. (O.E.H.) 2011. Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants.

NSW Department of Environment, Climate Change and Water. (DECCW) April, 2010. Aboriginal cultural heritage consultation requirements for proponents 2010.

NSW Department of Environment, Climate Change and Water. (DECCW) 24 September, 2010.  
Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.

NSW Department of Environment, Climate Change and Water. (DECCW) September, 2010. Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales.

NSW National Parks and Wildlife Regulation 2009. Updated current version 24<sup>th</sup> August. 2011.

NSW Office of Environment and Heritage (OEH) April, 2011. Guide to investigating, assessing and reporting on Aboriginal cultural heritage in New South Wales.

New South Wales Heritage Office 2001 Assessing heritage significance. NSW Heritage Manual Update No. 2. NSW Heritage Office, Sydney.

Pearson, M. (1973) The Macintyre Valley: A Field Archaeology and Ethnohistory. Unpublished B.A.Hons Thesis UNE. Armidale

Pearson, M (1981) Seen Through Different Eyes: Changing Land Use and Settlement Patterns in the Upper Macquarie River Region of NSW From Prehistoric Times to 1860. Unpublished Ph.D Thesis Dept. Prehistory and Anthropology, ANU. Canberra.

Pickard, J. October 2006. Conservation Management Plan for Osage Orange hedge in Peats Crater, Muogamarra Nature Reserve. N.S.W. Department of Environment and Conservation Report DEC 2006/529

Regan, J. 2013. "The Mathers of New England" Unpublished manuscript of Inverell District Family History Group.

Ross, J. 1997. Yetman Rock Art. Unpublished report to Australian Institute of Aboriginal Torres Strait Islander Studies.

Whish, Philippa. June 1968. The Tide of Time – Official Publication of the Inverell and District Historical Society. Wine Growing in the Inverell District pp. 23- 32.

Wiedemann, Elizabeth. 1980. Article in Inverell Times "Inverell Once Had Too Much Water" April 18<sup>th</sup> edition pp 4–5.

Wiedemann, Elizabeth. 1981. World of Its Own – Inverell's Early Years. "Where have all the vineyards gone?" pp. 139-142. Devill Publicity. Inverell.

## Appendix A. Consultation Diary – Lake Inverell “Off road recreational circuit”

Reference Number	Date	Item type	Recipient	Notes	Cross Reference
1. i)	29 <sup>th</sup> Aug	Letter to	Office of Environment and Heritage “The Department” a) P.O. Box 2111 Dubbo 2830 b) P.O. Box 402 Armidale 2350	As per requirements of consultation seeking names of Aboriginal people who may hold knowledge relevant to the proposed works.	
1.ii)	29 <sup>th</sup> Aug	Letter to	Anaiwan LALC – Greg Livermore CEO 7 Opal St Tingha 2369	ditto	
1.iii)	29 <sup>th</sup> Aug	Letter to	Registrar – Aboriginal Land Rights Act (1983) Level 3 2-10 Wentworth St Parramatta 2124	ditto	
1.iv)	29 <sup>th</sup> Aug	Letter to	Inverell Shire Council – Anthony Alliston. Manager Development Services P.O. Box 138 Inverell 2360	ditto	
1.v)	29 <sup>th</sup> Aug	Letter to	National Native Title Tribunal NSW Office Level 17 Law Courts Queens Square Sydney 2000	ditto	

1.vi)	29 <sup>th</sup> Aug	Letter to	NTSCORP Limited P.O. Box 2105 Strawberry Hills 2012	ditto	
1.vii)	29 <sup>th</sup> Aug	Letter to	Local Land Services – Harry White. Senior Strategic Land Services Officer Aboriginal Communities P.O. Box 411 Inverell 2360	ditto	
2	31 <sup>st</sup> Aug	Phone message left/ email sent to	Greg Livermore CEO Anaiwan	Courtesy “update” acknowledging RAP status and prior “Due Diligence” report	1.ii)
3	31 <sup>st</sup> Aug	Phone response from	Greg Livermore CEO Anaiwan	Greg responded to earlier phone message and email. General discussion re project – “would prefer any artefacts left on country”	2
4	31 <sup>st</sup> Aug	Email to	Anthony Alliston - Inverell Shire Council	Courtesy email notifying that consultation process had begun.	1.iv)
5	31 <sup>st</sup> Aug	Email from with letter attached	Harry White - LLS	Advising Greg Livermore Anaiwan should be consulted re project.	1.vii)
6	4 <sup>th</sup> Sept.	Email from with letter attached	Anthony Alliston – Inverell Shire Council	Advising Greg Livermore Anaiwan should be consulted re project.	1.iv)

7	5 <sup>th</sup> Sept.	Email from	NNTTS – Katherine Holme	Forwarded response form sent advising new process for enquiries re name / RAP search request: geospatialsearch@NNTT.gov.au	1.v)
8	6 <sup>th</sup> Sept.	Email to	<a href="mailto:geospatialsearch@NNTT.gov.au">geospatialsearch@NNTT.gov.au</a>	Revised search request form forwarded	7
9	6 <sup>th</sup> Sept.	Email from	NNTTS	Request received will be dealt with in due course	8
10	6 <sup>th</sup> Sept.	Phone response from	NNTTS “George”	Informing search area had 8 contacts from Gomelroi clan who would be contacted re project. “George” to inform them to contact directly asap if interested as a RAP	9
11	7 <sup>th</sup> Sept.	Email response from	<a href="mailto:geospatialsearch@NNTT.gov.au">geospatialsearch@NNTT.gov.au</a>	Confirmation of listing of Gomelroi people as having a registered interest in project area.	8/9/10
12	11 <sup>th</sup> Sept.	Phone response from	Raymond Weatherall 10 Meldrum Way Claymore 2559	Registration of interest as member of Gomelroi people following contact from NNTTS. <a href="mailto:Bubbly71@live.com.au">Bubbly71@live.com.au</a>	9/10/11
13	11 <sup>th</sup> Sept.	Email to	Raymond Weatherall <a href="mailto:Bubbly71@live.com.au">Bubbly71@live.com.au</a>	a) Confirming registration as RAP b) Checking email address	12
14	12 <sup>th</sup> Sept.	Email from	Raymond Weatherall <a href="mailto:Bubbly71@live.com.au">Bubbly71@live.com.au</a>	Confirming receipt of email	13



15	14 <sup>th</sup> Sept.	Newspaper Advert	Inverell Times <u>Appendix A.1</u>	Seeking expressions of Interest from potential RAP. Closing 28 <sup>th</sup> Sept.	
16	17 <sup>th</sup> Sept.	Email from	Michael Lieberman Acting Manager Northern Tablelands NSW NPWS	Apologising for delay and enquiring if a response was still required	1.i)b)
17	17 <sup>th</sup> Sept.	Email to	Michael Lieberman Acting Manager Northern Tablelands NSW NPWS	Advising response still appreciated	16
18	19 <sup>th</sup> Sept.	Email from	Registrar Aboriginal Land Rights – Jodie Rikiti contact	Nominating Anaiwan as Land Council to be consulted	1. iii)
19	22 <sup>nd</sup> Sept.	Email to	Jodie Rikiti Registrar Aboriginal Land Rights	Confirming Anaiwan as already included in the consultation process	18
20	25 <sup>th</sup> Sept	Phone call from	Roger Mehr Archaeologist OEH Armidale	Enquiring if OEH had responded to initial request for potential RAPs. Apologising for delay which is “usually completed within the week”.	1.i)b)
21	2 <sup>nd</sup> Oct.	Phone call to	Greg Livermore CEO Anaiwan	General discussion re RAP methodology process and background statement	
22	3 <sup>rd</sup> Oct.	Meeting with	Greg Livermore CEO Anaiwan <u>Appendix A. 2.</u>	Overview and approval of document “Information for a Registered Aboriginal Party”	21
23	3 <sup>rd</sup> Oct.	Email to	Raymond Weatherall Bubbly71@live.com.au	Forwarded document “Information for a Registered Aboriginal Party”	13/14
24	4 <sup>th</sup> Oct.	Mail reply from	Dimitri Young Senior Team Leader Planning	Outlining consultation requirements and including names of 2 potential	1.i)b) / 20

			North East Region OEH	Registered Aboriginal Parties for Inverell Local Government Area (LGA)	
25	5 <sup>th</sup> Oct.	Registered mail to	Mr Craig Archibald 27 Margaret St. Teralba 2284	Potential RAP contact supplied by OEH	24
26	5 <sup>th</sup> Oct.	Registered mail to	Mr Aaron Broad 1 Waratah Ave. Albion Park Rail 2527	Potential RAP contact supplied by OEH	24
27	8 <sup>th</sup> Oct.	Email from	Raymond Weatherall <a href="mailto:Bubbly71@live.com.au">Bubbly71@live.com.au</a>	Requested hard copy of document “Information for a Registered Aboriginal Party” – responded that earliest this could occur would be 16 <sup>th</sup> Oct. as “out of office”	23
28	16 <sup>th</sup> Oct.	Registered mail to	Raymond Weatherall 10 Meldrum Way Claymore 2559	Forwarded hard copy – “Information for a Registered Aboriginal Party”	27
29	26 <sup>th</sup> Oct.	Mail to	Dimitri Young Senior Team Leader Planning North East Region OEH	Forwarding list of RAPs as per 80C 5(b) “National Parks and Wildlife Regulation 2009”	
30	26 <sup>th</sup> Oct.	Mail to	Greg Livermore CEO Anaiwan	Forwarding list of RAPs as per 80C 5(b) “National Parks and Wildlife Regulation 2009”	
31	30 <sup>th</sup> Oct.	Returned mail from	Mr Craig Archibald 27 Margaret St. Teralba 2284	Unclaimed mail	25

32	5 <sup>th</sup> Nov.	Phone call from	Greg Livermore CEO Anaiwan	Unable to be part of fieldwork (7 <sup>th</sup> Nov) due to work commitments but happy for assessment to continue “as planned” with 3 x Anaiwan representatives who had previously undertaken “Due Diligence” report: Vicki Duncan Danny Johnson Di Marlow	
33	5 <sup>th</sup> Nov.	Meeting with	Harry White - LLS	Discussion re fieldwork process and planning	
34	9 <sup>th</sup> Nov.	Returned mail from	Mr Aaron Broad 1 Waratah Ave. Albion Park Rail 2527	Unclaimed mail	26
35	28 <sup>th</sup> Nov	Hand delivery	Harry White Greg Livermore	Copy of DRAFT report for comment	
36	29 <sup>th</sup> Nov	Response from	Harry White  <u>Appendix A.3</u>	1. A grammatical correction to Elder with capital E required. Completed. 2. AHIP to be facilitated - Anaiwan LALC to supervise relocation	35
37	29 <sup>th</sup> Nov	Letter to	Mr Dimitri Young	Updating OEH contacts for Inverell LGA.	24
38	3 <sup>rd</sup> Dec	Response from	Greg Livermore <u>Appendix A.4</u>	1. AHIP to be facilitated and 2. ACH education and awareness be undertaken with staff and contractors	35

## Appendix A.1. Publication giving notice of proposed activity – Regulation 80C (2) (c).

(Consultation Diary reference No. 15)

**Public Notices**

14th Sept 2018

### ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Lots 1 & 2 DP: 1101540. east of Lake Inverell Drive, Inverell.

Inverell Shire Council are investigating the potential to establish an "off road recreational circuit" on the land detailed above.

Representatives of Anaiwan LALC have undertaken a Due Diligence assessment of the area and a further Aboriginal Cultural Heritage assessment is now being undertaken.

Aboriginal people who hold cultural knowledge relevant to the area are invited to register their interest as part of the community consultation process. This consultation may assist in the preparation of an Aboriginal Heritage Impact Permit application for the Office of Environment and Heritage in their consideration and determination of the application.

To register your interest, Aboriginal people are encouraged to forward a written submission by Friday, 28th September, 2018 to:

Tony Sonter (archaeologist)  
Artefact and Aspect  
39 Brae St.  
Inverell 2360

E:  tsonter@bigpond.net.au

Appendix A.2. Information prepared and forwarded to Registered Aboriginal Parties. Document proofed and approved by Greg Livermore CEO Anaiwan LALC.

(Consultation Diary references 21/22)

Inverell Off-Road Recreational Circuit –  
Lake Inverell Reserve

Aboriginal Cultural Heritage Assessment  
Information for a Registered Aboriginal Party.

2<sup>nd</sup> October, 2018



## 1. Background Information.

Inverell Shire Council is proposing to construct a public facility that would provide a safe off-road environment for use by multiple groups from the community. (See Figure 1)

**Public Notices**



**Inverell Shire Council**  
www.inverell.nsw.gov.au

Administration Centre  
144 Otho Street  
PO Box 138  
Inverell NSW 2360

Phone: (02) 6728 8288  
Fax: (02) 6728 8277  
council@inverell.nsw.gov.au

**INVERELL OFF-ROAD RECREATIONAL CIRCUIT  
LAKE INVERELL RESERVE**

Inverell Shire Council is in the process of undertaking a Review of Environmental Factors under Part 5 of the Environmental Planning and Assessment Act 1979 for the proposed construction of an Off-Road Recreational Circuit on land forming part of Lake Inverell Reserve. The land is known as Lot 10 DP 252287 and Lots 1 & 2 1101540, Lake Inverell Drive, Inverell.

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment that can be enjoyed by multiple user groups for a broad range of activities, including:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, "Toughen Up" challenges, Triathlon, cycling and running events.

Any residents wishing to know more or provide comment about the Inverell Off-Road Recreation Circuit proposal are encouraged to contact Council, by phoning the Civil & Environmental Services Department on 02 6728 8200.

Written comments will be received up until 4.30pm, 16 October, 2018 and can be submitted via post to the General Manager, PO Box 138, Inverell NSW 2360 or email to council@inverell.nsw.gov.au.

**Figure 1.** Public Notice re Inverell Off-Road Recreational Circuit Lake Inverell Reserve. Published in various September editions of "The Inverell Times". This copy from Friday, September 28, 2018.

The proposed location is on land east of Lake Inverell Drive, north of Lake Inverell (Macintyre River) approximately 3km south-east of Inverell Post Office. (see Figures 2a. and 2b.)

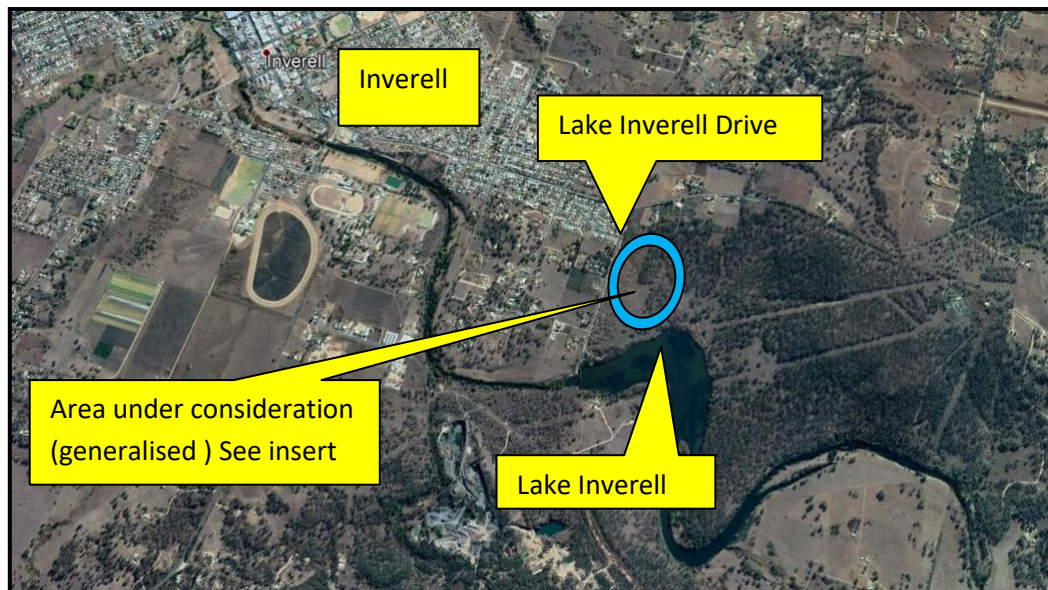


Figure 2a. General location of proposed development

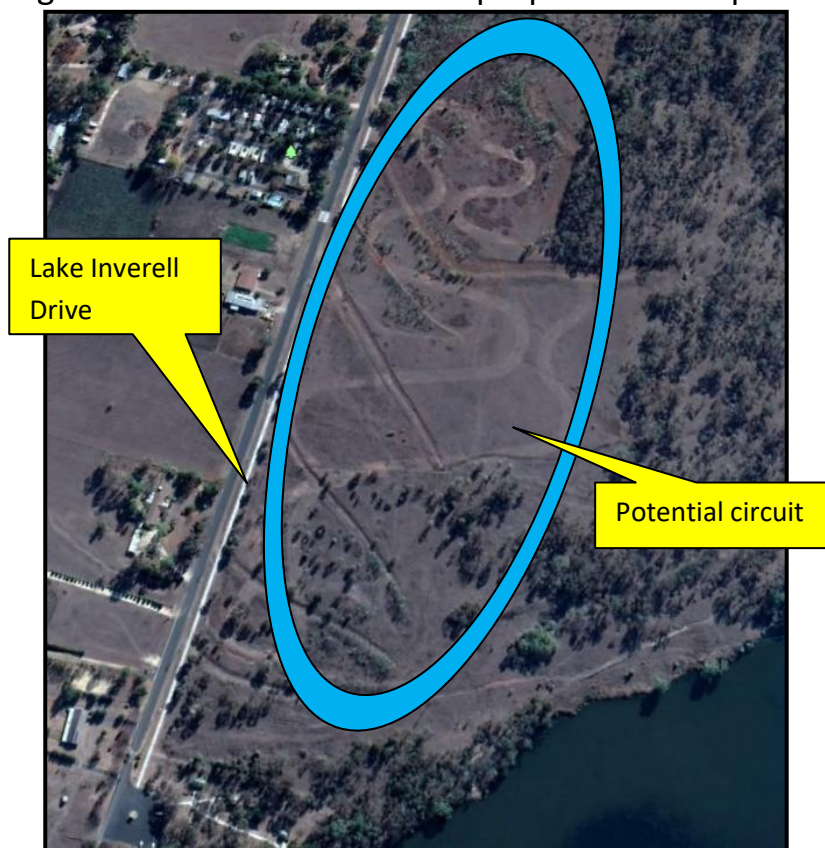
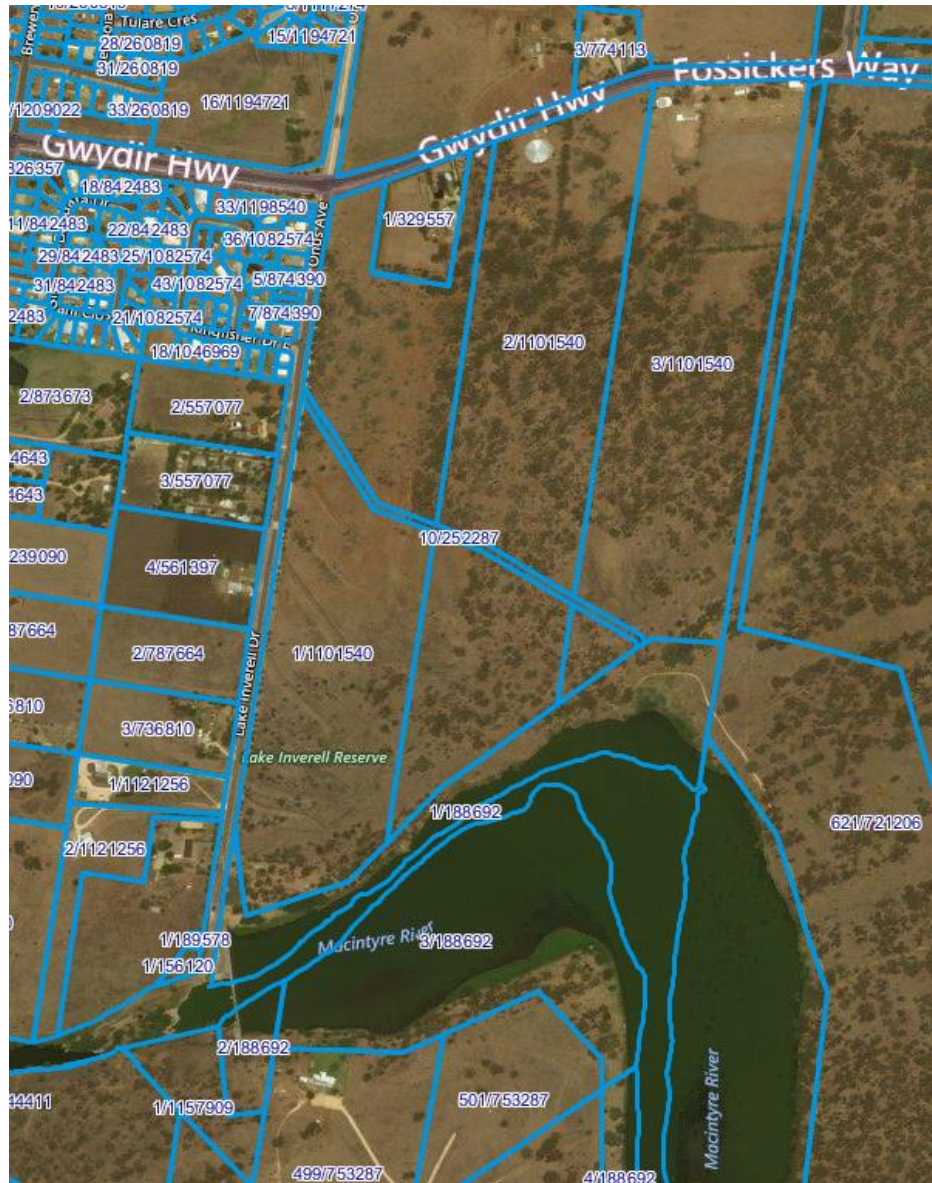


Figure 2b. Insert showing general location of proposed development relative to Lake Inverell Drive and Lake Inverell (Macintyre River)  
Sourced and designed from Google Earth (accessed 28<sup>th</sup> August, 2018)



An indicative circuit outline can be seen as the “slashed vegetation circuit” in Figure 2b.

The proposal is largely planned to exist on Lot 1. DP1101540 but also extends into the western edge of Lot 2. DP1101540 and includes part of Closed Road 10/252287. (See Figure 3).



**Figure 3.** Extract Inverell Local Environment Plan (L.E.P.) 2012  
Source: [www.maps.inverell.nsw.gov.au](http://www.maps.inverell.nsw.gov.au) (accessed 28<sup>th</sup> August 2018).

The area covered by both Lots 1 & 2 DP1101540 and Closed Road 10/252287 is currently Zoned as E3 Environmental Management upon which, among others, recreation and outdoor recreation facilities are permitted with consent. Both Lots are elongated rectangles running approximately north-south with the northern boundary adjoining The Gwydir Highway and the southern boundary being Lake Inverell foreshore.

Lake Inverell was originally a town water reservoir, completed in 1939 with a dam wall constructed across the Macintyre River and associated infrastructure installed.

## 2. Due Diligence

Inverell Shire Council approached Anaiwan Local Aboriginal Land Council (LALC), upon whose traditional land the proposed development is located, to undertake a Due Diligence survey for the purpose of determining the presence of any items of Aboriginal Cultural Heritage significance. This survey was conducted on the 11<sup>th</sup> May by four representatives of Anaiwan LALC; Greg Livermore (C.E.O) Daniel Johnson, Vicky Duncan and Dianne Marlow (Anaiwan Site Officers) in association with Anthony Alliston (Inverell Shire Council – Manager Development Services).

The Due Diligence survey identified 8 stone artefacts in various locations on the proposed project site and recommended “That Inverell Shire Council apply for an Aboriginal Heritage Impact Permit (AHIP) for the removal of the stone artefacts”. The report further recommended that the artefacts could be “relocated to an appropriate location away from the development area” (Greg Livermore unpublished report 11<sup>th</sup> May 2018) with the site registered on the Aboriginal Heritage Information Management System (AHIMS).

To facilitate an AHIP application an Aboriginal Cultural Heritage Assessment must be undertaken.

## 3. Proposed Aboriginal Cultural Heritage Assessment Methodology.

Given that the Due Diligence survey has already revealed the existence of objects of Aboriginal Cultural Heritage on the actual proposed circuit it is intended to widen the area to be assessed to include a potential “field of works” that may be impacted upon during the project construction. In consultation with Anthony Alliston (Inverell Shire Council – Manager Development Services 26<sup>th</sup> September, 2018) this field of works has been

identified as an area of approximately 20 hectares, lying largely south west of a nominal corner point E320413; N6703725 – see Figure 4.

As a component of the Aboriginal Cultural Heritage assessment it is intended to undertake a further field survey of the area in a boustrophedon manner using the same representatives of the Anaiwan LALC who undertook the original Due Diligence survey.

Limitations to such a survey include visibility noting that the track area prior to the Due Diligence survey had been slashed. (Greg Livermore page 2.)

It should also be noted that while the southern boundary of the area to be surveyed is currently within 200m of water, “a landscape feature that (may) indicate the likely existence of Aboriginal objects” (Due Diligence – September, 2010 page 12) the association is through the artificial raising of the water level by the damming of the Macintyre River to create Lake Inverell.





Figure 4. Nominal “field of works”

#### 4. Registered Aboriginal Party

As a Registered Aboriginal Party I would ask for your input in several areas.

- i) Apart from those objects already revealed during the Due Diligence survey are you aware of any objects of cultural value to Aboriginal people in the area?
- ii) Are you aware of any places of cultural value to Aboriginal people in the area?
- iii) Is there any comment you would like to make regarding the proposed methodology in undertaking the planned Aboriginal Cultural Heritage assessment.

Please note this consultation is not to be confused with employment. (as per “Aboriginal cultural heritage consultation requirements for proponents” Department Environment Climate Change Water, 2010)

It would be appreciated if any information or comment could be made as soon as possible with a final submission date being 31<sup>st</sup> October, 2018.

Contact details:

Phone: 0400673433.

Email: [tsonter@bigpond.net.au](mailto:tsonter@bigpond.net.au)

Mail: Tony Sonter

39 Brae St.

Inverell 2360

## Appendix A. 3. Response from Harry White on reviewing Draft ACH assessment report.

(Consultation Diary reference 36)





## Appendix A.4. Response from Greg Livermore CEO Anaiwan LALC.



### ANAIWAN LOCAL ABORIGINAL LAND COUNCIL

anaiwanlalc@tingha.net

7 Opal Street  
Tingha NSW 2369

P.O. Box 651  
Inverell N.S.W. 2360

Phone (02) 6723 3022  
Fax (02) 6723 3023

3<sup>rd</sup> December 2018

Tony Sonter  
Archaeologist  
Artefact and Aspect  
39 Brae Street  
Inverell NSW 2360

Dear Tony,

**Re: Inverell Off-Road Recreational Circuit Lake Inverell Reserve  
Aboriginal Cultural Heritage Assessment Draft Report.**

Further to a Cultural Heritage Assessment involving Anaiwan LALC Sites Officers and yourself at the proposed Off-Road Recreational Circuit, Lake Inverell Reserve undertaken on Wednesday 7<sup>th</sup> November 2018.

After reviewing your Report and having physically assessed the subject area on Friday 11<sup>th</sup> May 2018, Anaiwan LALC endorses your Report and advice to Inverell Shire Council.


I am happy that all Due Diligence re Aboriginal Cultural Heritage has been undertaken for this proposed development.

I also agree that Artefacts found within the development area are to be relocated but remain on Country at a suitable site so as not to lose their connection to Country.

Due to the nature of the proposed development area I also agree that Inverell Shire Council should make all employees and contractors aware of the potential that further artefacts may be uncovered during development and an Aboriginal Cultural Heritage Education and Awareness Workshop be carried out with all onsite personnel prior to works commencing.



If I am able to assist you further re this letter of support, please contact me at the Anaiwan LALC office on 0267233 022 during hours.

Regards

  
Gregory T. Livermore  
Chief Executive Officer  
Anaiwan LALC



## Appendix B. AHIMS Report as undertaken by Diane Marlow prior to Due Diligence assessment

	<b>Office of Environment &amp; Heritage</b>	<b>AHIMS Web Services (AWS) Search Result</b>	Purchase Order/Reference : lake inverell Client Service ID : 344199		
Diane Marlow 3 Hall Street Gilgai New South Wales 2360 Attention: Diane Marlow Email: acsworknsw@gmail.com Dear Sir or Madam:			Date: 10 May 2018		
<u>AHIMS Web Service search for the following area at Lot : 1, DP:DP1101540 with a Buffer of 50 meters, conducted by Diane Marlow on 10 May 2018.</u>					
The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.					
					
A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:					
<table border="1"><tr><td><input type="checkbox"/> Aboriginal sites are recorded in or near the above location.</td></tr><tr><td><input type="checkbox"/> Aboriginal places have been declared in or near the above location. *</td></tr></table>				<input type="checkbox"/> Aboriginal sites are recorded in or near the above location.	<input type="checkbox"/> Aboriginal places have been declared in or near the above location. *
<input type="checkbox"/> Aboriginal sites are recorded in or near the above location.					
<input type="checkbox"/> Aboriginal places have been declared in or near the above location. *					

## Appendix C Glossary and Terminology

Aboriginal Object – material evidence relating to Aboriginal occupation and habitation of an area

A.C.H – Aboriginal Cultural Heritage.

A.H.I.M.S. – (N.S.W.)\_Aboriginal Heritage Information Management System that exists as a searchable data base of recorded sites.

A.H.I.P. – Aboriginal Heritage Impact Permit. A document which may permit interference with Aboriginal sites and or places after complying with legislated process.

Anvil – A rock upon which another rock has been placed prior to hitting with a hammerstone. Usually a form of reducing a potential core to a more convenient size for further “working”.

Archaeological survey – The process of investigating an area for evidence of Aboriginal Cultural Heritage (A.C.H.) Usually involves a systematic walk over of an area (emu parade / boustrophedon) observing and recording but not disturbing the landscape.

Artefact – (synonymous artifact and object) Any object modified by people to be used by them. In the field usually made of stone, shell, bone and occasionally wood.

Aspect – orientation as identified by compass bearing / direction.

Attribute – Physical characteristic used to describe something in particular, especially in this sense an artefacts characteristics. (See also: backed, bulb of percussion, core, distal, dorsal, errillure, flake, negative scar, percussion, platform, proximal, reduction, retouch, ringcrack, termination, transverse snap, ventral)

Axe – (see also blank, grinding groove) A specific artefact usually intended to be hafted.

Bulb of percussion – Convex surface on the face of a flaked stone artefact created as a result of the striking force that removed the flake.

Aboriginal place – see Place

Alluvial – As deposited by water usually on the side of streams and rivers.

(Axe) Blank – a selected piece of fine grained material, usually igneous, that has been fashioned by flaking into a “rough” axe head prior to grinding. May have been quarried at a particular site and undergone reduction for convenience of transport / trade.

Backed artefact / blade – Retouch found on the “back” edge of an artefact to blunt the edge and allow it to be hafted or used more easily in the hand.

Blade – An artefact with parallel edges with the long axis at least double the short axis.

Bifacial flaking – when flakes have been removed from both sides of the artefact edge.

Boustrophedon – backwards and forwards as in the action of ploughing up and back

Bulb of percussion – A circular protrusion on the upper edge of a ventral scar immediately under the impact point. Generally regarded as the most important diagnostic characteristic for identifying flaked artefacts

Campsite – When a fire hearth and artefacts are found in association

Chert – an extremely fine grained hard siliceous rock containing microcrystalline quartz. A preferred raw material for stone tool manufacture.

(The) Code – Refers to the (N.S.W.) Department of Environment, Climate Change and Water document dated 24<sup>th</sup> September, 2010. *“Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales”*

Colluvial – An accumulation of soil washed down a slope and deposited at the base of the slope

Conchoidal fracture – a smooth curved fracture on a very fine grained material which has no natural fracture planes. Finest grained siliceous materials, quartz and glass fracture in this manner.

Consultation requirements – refers to the process as outlined in the (N.S.W.) Department of Environment, Climate Change and Water document dated April, 2010. *“Aboriginal cultural heritage consultation requirements for proponents 2010”*

Core – A piece of stone material from which flakes have been removed. If flake removal has been extensive it may take on a “U” or horsehoof appearance.

Cortex – Original “skin” of a pebble that displays weathered characteristics as opposed to a freshly exposed flaked surface.

D.E.C.C.W. – (N.S.W.) Department of Environment, Climate Change and Water.

Debitage – Waste (discarded) material usually found near a stone workshop site. Usually consists of cores and flakes.

Dendroglyph – A specific carving on a tree usually associated with ceremonial locations hence the carving is non utilitarian in nature unlike other scar trees.

Distal – Refers to the end point, usually sharp, of a flake opposite to the proximal platform point from where the flake was struck.

Dorsal – The surface of a flake that was originally part of the surface of a core and may be identified by having negative flake scars.

Due Diligence Code – refers to the (N.S.W.) Department of Environment, Climate Change and Water document dated September, 2010. *“Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales”*

Duricrust – An ancient hard layer on top of the landscape resisting erosion

Edge ground – An artefact produced by rubbing a selected stone (but occasionally other material such as shell) on another stone, usually sandstone, to produce a sharp edge. Generally refers to edge ground axes.

Field of works – Area over which a proposed development or disturbance will occur and therefore may need to be investigated for Aboriginal objects.

Flake – A piece of stone material created as a result of percussion. Can be reworked to become a specific artefact or may be found asdebitage.

Geometric microliths –Being geometric they display symmetry around their transverse axis. Usually backed for use and or mounting.

Grinding groove – groove created by the process of rubbing a selected stone on softer sandstone in the process of sharpening. Usually to create an edge ground axe occurring largely in groups on exposed bedrock in the vicinity of water. May be narrow if used to sharpen a wooden implement. Occasionally found on portable slabs.

Grindstone - A basal plate (slab), usually sandstone, upon which food or ochre has been prepared. Usually displays at least one surface convex “polished”. Requires a handstone (muller) to be used as the crushing / grinding implement.

(The) Guide – Refers to the (N.S.W.) Office of Environment and Heritage undated document “Guide to investigating, assessing and reporting on Aboriginal cultural heritage in N.S.W.”

Hafted – Process of joining usually a stone artefact onto a wooden handle. Usually involved both a “string and glue” attachment medium.

Hammerstone – A rounded stone used as the hammer to strike another stone to produce flakes / artefacts. Sometimes a hammerstone will display “bruises” from the percussion process.

Handstone – see Muller

Hearth – remnant fire remains usually baked earth / clay with signs of charcoal. May also be termed a “campsite” when artefacts are present.

Horsehoof – see core.

In situ – an object especially an artefact still remaining in its original position

Isolated find – Usually refers to a single artefact not found in association with others. Debate can occur as to what is the defined distance between artefacts in the field to consider they are in association with each other. N.P.W.S. policy calls it a site if 2 artefacts are located within 50 metres of each other.



Knapping – The process of working rocks to reduce them by flaking to produce an artefact.

Knapping floor – (Synonymous workshop or manufacturing site) An area over which a scatter of artefacts and flakes occur with evidence that several are derived from the same host core.

Manuport – These are usually stones “out of context” such as a round river stone found well away from a river source suggesting their presence in the location is likely to have involved human input.

Microliths - Very small artefacts where micro = small and lithic = stone.

Midden – An accumulation of material after consumption of a meal. Often formed from shells (freshwater mussel) they may also contain artefacts, animal bone and charcoal. Some may represent single use occasions while others may be extensive indicating frequent use over a long period of time. Usually associated with waterways both fresh and salt.

Muller – A stone held in the hand used to grind seeds or ochre on a grindstone. Usually displays a flattened smooth work surface

Negative scar – When a flake is removed from a core the core has a concave section removed – opposite of bulb of percussion.

N.P.W. Act – (N.S.W.) Legislation governing the protection and recognition of Aboriginal Cultural Heritage. 1974.

N.P.W. Regulation – (N.S.W.) National Parks Wildlife Regulation 2009

N.P.W.S – (N.S.W.) National Parks Wildlife Service.

P.A.D. – Potential Archaeological Deposit. An area that has potential for sub surface archaeological material to be deposited. Often sites as indicated by the presence of surface finds are erroneously given this title.

Percussion – When a hammerstone is used to hit a core or work a piece of stone material into an artefact.

Place – (synonymous with Aboriginal Place). A place that has significance for Aboriginal people as identified through cultural and or traditional connection. A Declared Aboriginal Place has been formally recognised under the NPW Act.

Platform – (synonymous with striking platform) the point of impact on a core where the hammerstone has hit.

Pressure flaking – Where the flaking process is undertaken not by striking but by a pressing force often along the edge of an artefact using a bone or wooden implement.

Proximal – End of a flake where it was hit by the hammer stone – platform with point of impact.

Quarry – A location where stone material or ochre was removed by Aboriginal people. Such a site usually indicates a good source of a quality resource or a restricted occurrence of the resource within the locale.

Reduction – Process of breaking down rock material into “workable” pieces.

Retouch – When the edge of an artefact is reworked / modified usually by additional flaking. See also stepped edge.

Ringcrack – Micro circular pattern indicating removal by force. Most prominent in highly siliceous material.

Sandstone – A sedimentary rock formed of individual particles / grains in a clay “cement” mix. Referred to as argillaceous when the high clay content allows the sandstone to breakdown into a slurry for grinding stone tools / hatchets.

Scatter – A collection of artefacts in association with each other across the landscape. The density of stone artefacts within the scatter can be inferred as being related to the intensity of site use. Scraper – An artefact, usually a modified flake, with one edge having extensive retouch.

Scar tree – (synonymous modified tree) Refers to the scar remaining from the removal of bark by Aboriginal people. Common scars include coolamon vessels, shields and canoes. See: Manual

Silcrete – silica rich duricrust often found in association with sandstone. Usually grey / white but occasionally browns and reds. A reasonably common raw material for artefact manufacture.

Siliceous – Containing silica

Site – A place or location that contains physical evidence of prior occupation by Aboriginal people. Both open and closed sites exist. Closed sites are associated with rock shelters

Stepped edge – Where irregular flakes are removed from a flake that may be the result of using the flake as a tool. The irregular nature of this process is inherently different to retouch.

Termination – Distal end of flake, usually sharp or pointed.

Transverse snap – A broken flake or artefact, broken across the width axis. May have been broken through use or later post deposition.

Ventral – Inner surface of a flake.

Visibility – A percentage measurement of vegetation cover (or lack of) that allows potential archaeological material to be seen.

Workshop site – see knapping floor

## Appendix D. - A.H.I.P. Application

ahip application form

### 1. Information about you, the applicant

Note: All information marked with an asterisk (\*) will appear on the public register.

#### 1.1 AHIP applicant

##### 1.1.1 Name of proposed AHIP holder(s)

An AHIP can be issued to individual(s), a company, body corporate or public authority, but **not** a partnership or joint-venture. It is OEH's policy that where appropriate, an AHIP will be issued to the company responsible for the proposed works and not to individual archaeologists or consultants employed or contracted by the company.

##### Applicant 1

Full name*	Mr. Paul Henry - General Manager		
Trading as*	Inverell Shire Council		
ACN/ABN	ACN:	ABN:72695204530	
Business address <sup>#</sup> / other address	No:144	Street name:Otho St.	
	Suburb:Inverell	State:NSW	Postcode:2360

##### Applicant 2

Full name*	Mr. Anthony Alliston - Manager Development Services		
Trading as*	Inverell Shire Council		
ACN/ABN	ACN:	ABN:72695204530	
Business address <sup>#</sup> / other address	No:144	Street name:Otho St.	
	Suburb:Inverell	State:NSW	Postcode:2360

Please attach extra page(s) if more space is needed, or if there are more than 2 applicants.

<sup>#</sup> Must be the registered business address as it appears in the ASIC register, for companies or individuals with an ABN.

AHIP application form

### 1.1.2 Contact details for project manager

The project manager will be responsible for overseeing, for and on behalf of the AHIP holder, the actions relating to the AHIP. The project manager may be the AHIP holder, an archaeologist or another suitably qualified and experienced individual depending on the nature of the proposed activities.

Name	Title Mr	Given name: Anthony
	Surname: Alliston	
Organisation	Inverell Shire Council	
Position	Manager Development Services	
Phone numbers	Business: 02 67288200	Mobile: 0425271633
Email	anthony.alliston@inverell.gov.au	

### 1.1.3 Contact details for archaeologist (if different to project manager)

Name	Title Mr	Given name: Tony
	Surname: Sonter	
Organisation	Artefact and Aspect	
Phone numbers	Business:	Mobile: 0400673433
Email	tsonter@bigpond.net.au	



AHIP application form

## 2. Proposed actions and the impacts on Aboriginal cultural heritage

Note: All information marked with an asterisk (\*) will appear on the public register

### 2.1 General description of the actions that the AHIP will cover

#### 2.1.1 Development/project name\*

Insert the name of the overall development/project or a very brief description. Include reference to a stage if it is a staged project.

Lake Inverell Off-Road Recreational Circuit - developing an off-road recreational facility for community groups to use such as bike riding and walking on an area set aside as catchment for Lake Inverell.

#### 2.1.2 Location\*

Please provide the following details of the location of the land to which this application applies. A brief description followed by specific details.

Land description or Property name	-2 lots east of Lake Inverell Drive		
Street address	No:	Street name: Lake Inverell Drive	
	Town/Suburb: Inverell	State: NSW	Postcode: 2360
Title details	Portion/s:	Parish: Inverell	
	County: Gough	Lot & DP No: Lots 1 & 2. DP 1101540	

#### 2.1.3 Local government area\*

Please provide the name of the local government area to which this application applies. If the project covers multiple local government areas, please list them all.

Local government area/s	Inverell
-------------------------	----------

ahip application form

### 2.1.4 Description of 'harm' to Aboriginal objects or places\*

Please indicate in the following table the type/s of actions that you wish the AHIP to cover.

Please note that these are specific actions that will 'harm' Aboriginal objects or places. Harm, in relation to an Aboriginal object, includes movement, damage, destruction or defacement.

In relation to an Aboriginal place, harm includes damage, defacement or destruction. See the definition of harm under section 5(1) of the NPW Act.

I would like my AHIP to cover the following actions (check (X) all that apply):

a. Harm including movement of Aboriginal objects (including any movement, damage, defacement or destruction of Aboriginal objects)	
Movement only of certain Aboriginal objects	<input checked="" type="checkbox"/>
Test excavations <sup>1</sup>	<input type="checkbox"/>
Salvage excavations	<input type="checkbox"/>
Community collection	<input checked="" type="checkbox"/>
Harm to certain Aboriginal objects through the proposed works	<input type="checkbox"/>
Other action(s) causing harm	<input type="checkbox"/>
b. Areas where Aboriginal objects will not be harmed (i.e. certain Aboriginal objects and/or areas within the area of the AHIP application that will not be harmed)	<input type="checkbox"/>
c. Harm to an Aboriginal place (including any damage, defacement or destruction of the Aboriginal place)	<input type="checkbox"/>
Specify the harm:	Movement from in situ location to a designated location on country "out of harms way"

### 2.1.5 AHIP duration and term\*

Please indicate the period for which you seek an AHIP (e.g. 2 years).

Period of the AHIP	1 year
--------------------	--------

Please indicate the proposed term of the AHIP; start and end dates. The proposed term of an AHIP should closely mirror the period within which harm on Aboriginal objects and/or Aboriginal places will occur.

Proposed start date:	01/01/ 2019
Proposed end date:	30/12/2019

<sup>1</sup> Include only test excavations that cannot be carried out in accordance with the requirements of the *Code of Practice for Archaeological Investigation in New South Wales* ([www.environment.nsw.gov.au/licences/archinvestigations.htm](http://www.environment.nsw.gov.au/licences/archinvestigations.htm)).



### 3. Accompanying/supporting documentation

#### 3.1 Necessary consents

Please check (X) 'Yes' or 'No'	Yes	No
Is development consent under Part 4 of the <i>Environmental Planning and Assessment Act 1974</i> (EP&A Act) or is another approval required (e.g. an approval under Part 5 of the EP&A Act – review of environmental factors, or a licence under the <i>Protection of the Environment Operations Act 1997</i> )?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has consent or approval under the EP&A Act or other necessary approval been granted? <sup>2</sup> If 'Yes' you must attach a copy of the consent or other approval.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.2 Works on OEH national parks and reserves

Please check (X) 'Yes' or 'No'	Yes	No
Does the application relate to land reserved, managed or acquired under the NPW Act or aquatic reserve under Division 2 of Part 7 of the <i>Fisheries Management Act 1994</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the application supported by the relevant National Parks and Wildlife Service Regional Manager or Manager Aquatic Protected Areas? If 'Yes' attach evidence of the relevant Manager's support.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### 3.3 Aboriginal cultural heritage assessment report

Your application must be accompanied by an **Aboriginal Cultural Heritage Assessment Report**. The report must be provided in two formats:

1. Hard copy
2. Electronic copy as an unprotected PDF file.

The Guide to investigating, assessing, and reporting on Aboriginal cultural heritage in NSW (the Guide) explains what an Aboriginal Cultural Heritage Assessment Report should cover.

Use the checklist below to ensure that all the necessary information is included in your report.

Within my Aboriginal Cultural Heritage Assessment Report the following key pieces of information have been included:		Yes
<b>1</b>	<b>Restricted information</b> (Guide section 3.1) Have you clearly identified any information that is restricted because it is culturally sensitive? Note that you, the applicant, are responsible for ensuring the AHIMS (Aboriginal Heritage Information Management System) site card reflects that the information is restricted.	<input checked="" type="checkbox"/>
<b>2</b>	<b>Confidentiality information</b> (Guide Appendix D) Have you identified any information that is confidential for any reason (excluding restricted information under 1 above)?	<input checked="" type="checkbox"/>
<b>3</b>	<b>Copyright</b> (Guide Appendix D) Have you identified who owns the copyright to the Report? You should set out who prepared the Report and the circumstances under which the Report was prepared (e.g. is the author the copyright owner? Was the author retained by a commissioning party and if so did the agreement contain a clause about copyright ownership?).	<input checked="" type="checkbox"/>
	Have you signed the indemnity on the AHIMS Heritage Report Cover Sheet when submitting your report to AHIMS?	<input checked="" type="checkbox"/>

<sup>2</sup> If a consent or approval is required but has not yet been granted, OEH will not issue an AHIP in most circumstances.

AHIP application form

Within my Aboriginal Cultural Heritage Assessment Report the following key pieces of information have been included:		Yes
<b>4</b>	<b>Description of the proposed activity</b> (Guide section 3.2) Have you described the nature, scope and objectives of the proposed activity (including research activities, if appropriate)?	<input checked="" type="checkbox"/>
<b>5</b>	<b>Indicate the proposed term of the AHIP</b> (Guide section 3.2) Have you provided a time period for how long you need the AHIP for (include start and end dates)? (see also question 2.1.5 in this form)	<input checked="" type="checkbox"/>
<b>6</b>	<b>Description of the area where the proposed activities are to be undertaken, the subject of this AHIP application including exclusion areas, and maps</b> (Guide sections 2.2.1, 3.1.2, 3.2) Have you included the property name, street address, cadastre information such as lot and DP, local government area, parish and zone, subject of this AHIP application and also any exclusion areas?	<input checked="" type="checkbox"/>
	Have you described the environment/landscape relevant to the proposed activity including topography and geology?	<input checked="" type="checkbox"/>
	Have you included a topographic map clearly showing the location of the land that is the subject of this AHIP application and any exclusion areas, and development boundary (aerial photographs, detailed site maps and title plans may also be provided)? The map should provide clear cadastre information including a lot and DP number, the local government area, parish and zone (as applicable).	<input checked="" type="checkbox"/>
<b>7</b>	<b>Description and identification of the Aboriginal objects and AHIMS sites</b> (Guide sections 2, 2.2.2, 2.2.3, 3.1, 3.2, Appendix C) Have you included a map of the heritage values present and the elements in the landscape associated with those values?	<input type="checkbox"/>
	Have you described Aboriginal peoples past and/or current use of the land, relevant to the activity and the surrounding areas?	<input checked="" type="checkbox"/>
	Have you included AHIMS site numbers?	<input type="checkbox"/>
<b>8</b>	<b>Details of other applications for AHIPs within the area which is the subject of this AHIP application</b> (Guide section 3.2) Have you indicated whether any other AHIPs have been issued or refused relating to the area subject of this AHIP application?	<input type="checkbox"/>
	Have you included the AHIP number and status (e.g. current/expired/refused)?	<input type="checkbox"/>
<b>9</b>	<b>Details of the consultation process</b> (Guide sections 1.4, 2.3, 3.2) Have you provided a description of the consultation process you conducted and how it meets requirements set out in clause 80C of the National Parks and Wildlife Regulation 2009? This is further explained in OEH's <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> . Identify where you haven't been able to comply with the requirements in the regulation and provide any associated documented evidence such as letters and advertisements.	<input checked="" type="checkbox"/>
	Have you provided a list of the registered Aboriginal parties?	<input checked="" type="checkbox"/>
	Have you included copies of submissions received, issues raised and your responses? (It is recommended that this be presented in table format – name of person who made the submission, issue(s) raised and your responses to them).	<input checked="" type="checkbox"/>
<b>10</b>	<b>Statement of significance of the cultural heritage values</b> (Guide sections 2.4 and 3.2)	<input checked="" type="checkbox"/>
<b>11</b>	<b>Description of the actual or likely harm</b> (Guide sections 2.5 and 3.2)	<input checked="" type="checkbox"/>
<b>12</b>	<b>Description of the measures to avoid harm</b> (Guide sections 2.6 and 3.2)	<input checked="" type="checkbox"/>



AHIP application form

Within my Aboriginal Cultural Heritage Assessment Report the following key pieces of information have been included:		Yes
<b>13</b>	<b>Description of the measures to minimise harm</b> including: (Guide sections 2.5, 2.7, 3.2)	
	Have you justified the measures chosen to minimise harm, including an explanation of all alternatives considered and why they were or were not included in the final proposal?	<input checked="" type="checkbox"/>
	Have you shown how ecological sustainable development principles have been considered?	<input type="checkbox"/>
	Have you described how cumulative harm has been considered?	<input type="checkbox"/>
<b>14</b>	<b>Information about</b> what you, the applicant, intends to do with <b>salvaged</b> and/or <b>collected objects</b> , for example, if objects will be transferred to an Aboriginal owner, or whether a care and control agreement will be sought under section 85A(1)(c) NPW Act.	<input checked="" type="checkbox"/>

**Note:** Any additional information that you may have that is not included in the checklist above should also be included in your Aboriginal Cultural Heritage Assessment Report.

### 3.4 Management of salvaged Aboriginal objects

Please provide information about what you, the applicant, intend to do with **salvaged** and/or **collected objects**, if applicable.

#### 3.4.1 Temporary storage of certain Aboriginal objects

If the Aboriginal objects are proposed to be moved from the land, provide details of the temporary storage location in the table below.

Location name:	n/a
Address:	
Storage particulars:	

#### 3.4.2 Long-term management of certain Aboriginal objects

Long-term management of Aboriginal objects should be negotiated between the applicant, the registered Aboriginal parties and any other relevant party. Provide information of any long-term management plans that have been agreed upon, including any written authority from registered Aboriginal parties or the Aboriginal owner.

Please check (X) 'Yes' if applicable

	Yes
Have you applied to the Australian Museum Trust, for it to hold the Aboriginal Objects collected under the terms of this AHIP? If 'yes' provide evidence of your contact with the Australian Museum. (Refer to the Australian Museum's <i>Archaeological Collection Lodgement Policy and Protocols for the Deposition of Archaeological Materials</i> ).	<input type="checkbox"/>
Will objects be transferred to an Aboriginal owner <sup>3</sup> ?	<input type="checkbox"/>
Will objects be transferred under a Care and Control Agreement to an Aboriginal person or organisation representing Aboriginal people in accordance with section 85A(1)(c) of the NPW Act? If 'yes' you must apply for the transfer of Aboriginal objects for safekeeping under section 85A(1)(c) of the NPW Act (see <i>Care agreements</i> for the form and more information).	<input type="checkbox"/>
Do you intend to rebury or return Aboriginal objects to the location they originated from? If 'yes' reburial on site must be undertaken in accordance with Requirement 26 'Stone artefact deposition and storage' in the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> .	<input checked="" type="checkbox"/>

<sup>3</sup> Aboriginal owner as defined under section 4(1) of the *Aboriginal Land Rights Act 1983*.



AHIP application form

## 4. Fees and signatures

### 4.1 Determining the fee for AHIP processing

Please indicate the estimated **total** cost of the development works to determine the relevant administrative fee. Payment of the fee (cheque or credit card authorisation) must be submitted with your application.

**Please check (X) applicable fee.**

Section 90A AHIP	Fee <sup>4</sup>	
Work to an owner-occupied dwelling costing up to \$100,000	\$80	<input type="checkbox"/>
Other work costing up to \$100,000	\$133	<input type="checkbox"/>
Work between \$100,000 and \$250,000	\$200	<input type="checkbox"/>
Work between \$250,000 and \$500,000	\$332	<input type="checkbox"/>
Work between \$500,000 and \$1 million	\$532	<input type="checkbox"/>
Work between \$1 million and \$2 million	\$997	<input type="checkbox"/>
Work between \$2 million and \$5 million	\$1,330	<input type="checkbox"/>
Work over \$5 million	\$2,660	<input type="checkbox"/>

Please check the method of payment.

☐ Cheque enclosed. Make cheque payable to 'Office of Environment and Heritage'.

☐ Please debit my VISA/ MASTERCARD credit card in the amount of \$ \_\_\_\_\_

Card No: \_\_\_\_\_ Expiry date: \_\_ / \_\_

Card Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_ / \_\_ / \_\_

<sup>4</sup> Processing fees are exempt from GST by the Commonwealth Treasurer's Division 81 determination under A New Tax System (Goods and Services Tax) Act 1999.

Final application form

## 4.2 Signature of proposed AHIP (holders)

This application may only be signed by a person(s) with legal authority to sign it. The various ways in which the application may be signed, and the people who may sign the application, are set out in categories below.

Please check (X) the box next to the category that describes how this application is being signed

If the proposed AHIP holder is:	The application must be signed and certified by one of the following:
an individual	<input type="checkbox"/> the individual.
a company	<input type="checkbox"/> the common seal being affixed in accordance with the <i>Corporations Act 2001</i> , or two directors, or a director and a company secretary, or if a proprietary company has a sole director who is also the sole company secretary – by that director.
a public authority other than a council	<input type="checkbox"/> the chief executive officer of the public authority, or their authorised delegate.
a local council	<input checked="" type="checkbox"/> the general manager in accordance with s.377 of the <i>Local Government Act 1993</i> (LG Act), or the seal of the council being affixed in a manner authorised under the LG Act.

I/We (the proposed AHIP holder):

- apply for an AHIP
- declare that the information in this application form (including all the attachments) is not false or misleading
- declare that all the information required in the Checklist is attached.

### Applicant 1

Signature		Signature	
Name (printed)	Mr Paul Henry	Name (printed)	Mr Anthony Alliston
Position (in company or authority)	General Manager Inverell Shire Council	Position (in company or authority)	Manager Development Services Inverell Shire Council
Date		Date	

Seal (if signing under seal):

### Applicant 2

Signature		Signature	
Name (printed)		Name (printed)	
Position (in company or authority)		Position (in company or authority)	
Date		Date	

Seal (if signing under seal):

**Please complete the checklist (5.1) and read the additional information (5.2) before submitting this application.**



AHIP application form

## 5. Checklist and additional information

### 5.1 Checklist

This application must be accompanied by the documents and information listed in the checklist below.

If the listed documents are not provided OEH will notify you in writing and you may be required to provide further information.

	Yes
If applicable, have you attached a <b>copy of any relevant Development Consent or other approval</b> (question 3.1 above)	<input type="checkbox"/>
If applicable, have you attached the <b>evidence of support from the relevant National Parks and Wildlife Service Regional Manager or Aquatic Protected Area Manager</b> , where works will be on the OEH estate (question 3.2 above)	<input type="checkbox"/>
Have you attached the <b>Aboriginal Cultural Heritage Assessment Report?</b> (section 3.3 above) Have you provided your report to OEH in two formats: 1. Hard copy 2. Electronic copy as an unprotected PDF file	<input checked="" type="checkbox"/>
Have you filled in the <b>Aboriginal Heritage Information Management System table template</b> and also attached the <b>AHIMS site recording form</b> (for new sites, not recorded)? (section 3.5 above)	<input type="checkbox"/>
Have you paid the correct application <b>fee</b> , payable by cheque or credit card (section 4.1 above)	<input type="checkbox"/>
Has this application been <b>signed and dated</b> by the appropriate person (section 4.2 above)	<input checked="" type="checkbox"/>

### 5.2 Additional information

1. It is an offence under s169 (3) of the NPW Act to knowingly give any information in this form that is false or misleading in a material particular.
2. Details of the AHIP application will appear on OEH's Public Register.
3. OEH may make copies of any report provided in relation to this AHIP application and will include a copy of the report on the AHIMS register, which can be made available to members of the public on request. For information about how to access and use AHIMS refer to: [Aboriginal Heritage Information Management System](#).
4. If OEH does not make a determination of the AHIP application within 60 days it is 'deemed to be refused'. 'Deemed to be refused' means that the applicant has the right to challenge OEH's decision to refuse the application, in the Land and Environment Court. Note, OEH can still continue to process the application after 60 days and grant or refuse the AHIP application. You should always contact OEH in the first instance if you have any queries regarding your application.
5. Send completed form (hard copy and electronic copy), fee and attachments to your nearest OEH office identified below.

## **APPENDIX D – Map of Range Danger Areas**







## **APPENDIX E – Community Consultation Package and Submissions**

# **Inverell Shire Council Consultation Package**

Website and Facebook Page

Inverell Times Notice

Notification letter to residents

## **INVERELL SHIRE COUNCIL**

### **INVERELL OFF-ROAD RECREATIONAL CIRCUIT, LAKE INVERELL RESERVE**

Inverell Shire Council is in the process of undertaking a Review of Environmental Factors under Part 5 of the *Environmental Planning and Assessment Act* 1979 for the proposed construction of an Off-Road Recreational Circuit on land forming part of Lake Inverell Reserve. The land is known as Lot 10 DP 252287 and Lots 1 & 2 1101540, Lake Inverell Drive, Inverell.

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment that can be enjoyed by multiple user groups for a broad range of activities, including:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, “Toughen Up” challenges, Triathlon, cycling and running events.

Any residents wishing to know more or provide comment about the Inverell Off-Road Recreation Circuit proposal are encouraged to contact Council, by phoning the Civil & Environmental Services Department on 02 6728 8200.

Written comments will be received up until 4.30pm, 16 October, 2018 and can be submitted via post to the General Manager, PO Box 138, Inverell NSW 2360 or email to [council@inverell.nsw.gov.au](mailto:council@inverell.nsw.gov.au).

---

For Publication: **ISC Website and Facebook Page**

# Times

## Connect with Classifieds

Phone: 02 6720 0100  
Email: [classifieds.inverell@fairfaxmedia.com.au](mailto:classifieds.inverell@fairfaxmedia.com.au)

**Times**  
Connect with  
**Classifieds**

Place a Classifieds ad  
6720 0100  
[classifieds.inverell@fairfaxmedia.com.au](mailto:classifieds.inverell@fairfaxmedia.com.au)  
Save time, submit online 24/7  
[advertisers.com.au](http://advertisers.com.au)

Print and online packages available  
throughout Australia  
Ongoing business advertising self service  
enquiries: [acmadonline@fairfaxmedia.com.au](mailto:acmadonline@fairfaxmedia.com.au)

Emoji now available 😊

### Funeral Notices

**PATSY PERRETT**  
Aged 75 years

Late of McLean Care, Inverell and formerly of "Carrawarra", Gum Flat and Henderson Street, Inverell.

Beloved daughter of Jack & Lurl Perrett (both deceased), dearly loved sister of Joy & Robert Mason, Julie Daley and Kerry Findlay.

Relatives and friends are respectfully informed that Patsy's Funeral Mass will be held at the Sacred Heart Catholic Church, Inverell, this Friday 28th September, commencing at 11:00 am, followed by interment at the Warialda Cemetery.

Flowers will be lovingly accepted or friends may wish to make a donation to the NSW Cancer Council. A donation stand will be at the Church.

**THORLEY AND SONS FUNERAL SERVICES**  
INVERELL Phone (02) 6722 2566  
FDA of NSW Accreditation No 12029-03

**PATRICK FRANCIS ALOYSIUS**  
Clancy  
"Pat"  
Aged 61 years

Late of Auburn Vale Road, Inverell.  
Dearly loved Son, Brother, Uncle, Nephew and Cousin.

Relatives and friends, along with the Sacred Heart Parish Community are warmly invited to celebrate Pat's Christian Farewell, which will be held at the Sacred Heart Catholic Church, Inverell, this Thursday 27th September, commencing at 10:30 am, followed by interment at the Inverell Cemetery.

In lieu of flowers, friends may wish to make a donation to the Children's Cancer Foundation. A donation stand will be at the Church.

**THORLEY AND SONS FUNERAL SERVICES**  
INVERELL Phone (02) 6722 2566  
FDA of NSW Accreditation No 12029-03

**NEVILLE JOHN STIEGER**  
Aged 76 years

Late of Mulligan Street, Inverell.  
Beloved husband of Audrey, dearly loved father & father-in-law of Kim & Geoff and Mandy & Mick, adored pop, old pop and brother.

Relatives and friends are respectfully informed that Neville's Funeral Service will be held at the Sapphire City Crematorium Chapel, Inverell, this Wednesday 26th September, commencing at 10:30 am, followed by cremation.

Members of the Inverell Golf Club are especially invited to attend. In lieu of flowers friends may wish to make a donation to Inala House, Tamworth. A donation stand will be at the Chapel.


**THORLEY AND SONS FUNERAL SERVICES**  
INVERELL Phone (02) 6722 2566  
FDA of NSW Accreditation No 12029-03

### In Memoriam

**JAMES PATRICK SWEENEY**  
"Jim"

25-11-1938 to  
27-9-2017

Missing you everyday  
Cathy, David, Maureen,  
Michelle & Gail



### Celebrations

**Do you have something to celebrate?**

Birthday? Engagement? Wedding? Baby?

Let us share your happiness for as little as \$35 for 3cm x 2 col ad with text and a photo

\*Need more words? Additional text and emojis are available at regular prices.

Connect with **Classifieds**

### Public Notices

**Guyra TroutFest**  
Sept 29 - Oct 1, 2018

- Fishing competitions – great prizes & giveaways
- Fishing simulator all weekend
- Market day – stalls, music, train rides, displays, trout tasting
- Art Show and competition
- Collector's displays

[guyratroutfest@gmail.com](mailto:guyratroutfest@gmail.com)  
02 6775 5735  
[www.guyratroutfest.weebly.com](http://www.guyratroutfest.weebly.com)

**The Inverell Times**

Would like to inform our valued readers that the office will be closed on **Monday 1st October** due to the **Labour Day Public Holiday**.

Classified ads for **The Inverell Times** Tuesday 2nd October will need to be completed by 2pm **Friday 28th September**.

**67200 100**  
[classifieds.inverell@fairfaxmedia.com.au](mailto:classifieds.inverell@fairfaxmedia.com.au)

**SPANLINE**  
Rep in area next week.  
Patios, Rooms, Cladding, Carports. As on TV. BL83737C. Call on 6721 0588 [www.spanline.com.au](http://www.spanline.com.au)

**SAVE UP TO 50%**  
\*Excludes some categories. Conditions apply

**Are you being paid?**

Our ValueMyCV tool will tell you what you should be earning.

Upload your CV to [adzuna.com.au](http://adzuna.com.au)

**adzuna**  
Your new job starts here

### Public Notices

**Inverell Shire Council**

Administration Centre  
144 Otho Street  
PO Box 138  
Inverell NSW 2360

Phone: (02) 6728 8288  
Fax: (02) 6728 8277  
[council@inverell.nsw.gov.au](mailto:council@inverell.nsw.gov.au)

**INVERELL OFF-ROAD RECREATIONAL CIRCUIT LAKE INVERELL RESERVE**

Inverell Shire Council is in the process of undertaking a Review of Environmental Factors under Part 5 of the Environmental Planning and Assessment Act 1979 for the proposed construction of an Off-Road Recreational Circuit on land forming part of Lake Inverell Reserve. The land is known as Lot 10 DP 252287 and Lots 1 & 2 1101540, Lake Inverell Drive, Inverell.

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment that can be enjoyed by multiple user groups for a broad range of activities, including:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, "Toughen Up" challenges, Triathlon, cycling and running events.

Any residents wishing to know more or provide comment about the Inverell Off-Road Recreation Circuit proposal are encouraged to contact Council, by phoning the Civil & Environmental Services Department on 02 6728 8200.

Written comments will be received up until 4.30pm, 16 October, 2018 and can be submitted via post to the General Manager, PO Box 138, Inverell NSW 2360 or email to [council@inverell.nsw.gov.au](mailto:council@inverell.nsw.gov.au).

**QUOTATIONS FOR WINNING AND STOCKPILING OF GRAVEL FOR THE 2018/2019 RESHEETING PROGRAM**

Council is currently calling for Quotations for the provision of Gravel Winning and Stockpiling Services, for the 2018/2019 Gravel Re-sheeting Program.

Copies of the specification documentation can be obtained from Council's Administration Centre, 144 Otho Street, Inverell between 8.30am and 4.30pm Monday to Friday or by contacting Council's Civil & Environmental Services Administration Staff on 02 67288 200 or email [Nicole.Riley@inverell.nsw.gov.au](mailto:Nicole.Riley@inverell.nsw.gov.au).

Canvassing of Councilors will result in disqualification of the quotation. The lowest quote will not necessarily be accepted.

The completed documents must be submitted to Council prior to 3.30pm 19 October 2018, in the Tender Box at the Administration Centre in Otho Street, clearly marked "Gravel Winning 2018/2019".

If you have any questions or require any clarification please contact Council's Civil and Environmental Services Division on 02 67288 200.

**Administrative Centre**  
144 Otho Street  
Inverell NSW 2360

**P.J. HENRY PSM**  
General Manager

### Positions Vacant

**CCA COCA-COLA AMATIL**

Are you interested in a Career in Sales?

Coca Cola Amatil are currently recruiting for a driven and dynamic individual to join the Regional Sales team as a **Business Development Executive**.

Applicants must have strong sales and service background ideally from a hospitality or retail background & hold a full valid drivers license.

If you are interested, please email your resume through to [sally.henderson@ccamatil.com](mailto:sally.henderson@ccamatil.com)

**Applications close Friday, 5th October**

**Armajun Aboriginal Health Service**  
**Aboriginal Health Worker**  
Full Time - INVERELL

Armajun is a progressive Aboriginal organisation offering best practice primary health care services to Aboriginal people living in the New England region.

Armajun is looking for an Aboriginal Health Worker with experience working as a Health or Community Worker and with good networks within the local Aboriginal community.

All applications must address the Selection Criteria that is available from **James Sheather on 67 219 777**  
0409 823 710 or  
[jsheather@armajun.org.au](mailto:jsheather@armajun.org.au)

Closing date: **Monday 1st October 2018**

**This position is Aboriginal designated under Section 14 of NSW Anti-Discrimination Act (1977).**

### For Sale

**DISABILITY EQUIP**  
Elec lifter & bed, 2 wheel chairs (1 new), 2 walking frames (1 new), plus ramps, all good cond. Ph 0456 645982.

### Motor Vehicles

**KIA SORENTO** h/back, auto, 28,000kms, very g /cond, bright red, t/bar, good tyres. (BR34CF) \$13,500. Ph 67222 183

### Goats

**ALL GOATS WANTED**  
Can arrange pick up  
Can supply mustering  
Ph Harry  
0400870583

### Produce

**EBONY COW PEA**  
\$2.50/kg + gst.  
Ph 67232 888 or 0427 009 129.

### Adult Services

**NEW to town,**  
gorgeous Asian, hot, sexy, size 8, 40D. Ph 0403 582 765

**ADD COLOUR TO YOUR AD**

**Ramp up the heat this Winter**

Place an ad under the "For Sale" section for only \$12  
This includes four lines of wording and an emoji

Connect with **Classifieds**  
Call us today on (02) 6720 0100  
or email [classifieds.inverell@fairfaxmedia.com.au](mailto:classifieds.inverell@fairfaxmedia.com.au)

**Join the social network for your suburb**

Every day over 6,500 suburbs across Australia use Nabo to get better connected with their local area. Here you can share recommendations, discover events, and buy, sell or borrow items all with people local to you.

**nabo.com.au**

Download on the App Store  
Get it on Google play

**nabo**

Our Ref: s28.7.18/63  
Contact: Anthony Alliston, Manager Development Services

6 September 2018

**NOTIFICATION OF PROPOSED DEVELOPMENT  
INVERELL OFF-ROAD RECREATIONAL CIRCUIT, LAKE INVERELL DRIVE, INVERELL**

Inverell Shire Council would like to notify you as a nearby landowner of its proposal to construct an Off-Road Recreational Circuit over part of Lake Inverell Reserve.

The site forms part of the Lake Inverell Reserve off the Gwydir Highway, Inverell. The subject land is described as Lot 10 DP 252287 and Lots 1 & 2 DP 1101540 having frontage to Lake Inverell Drive. A site plan has been included with this letter.

**BACKGROUND**

To facilitate the growing demand for passive and active outdoor recreation activities within Inverell the Inverell Off-Road Recreational Circuit is intended to be an adaptable public facility, providing a safe off-road environment, that can be enjoyed by multiple user groups for a broad range of activities as detailed below.

**PURPOSE AND DESIGN**

When designing the Circuit, the following activities were considered and catered for in the single, overall design:

- Walking;
- Adult and children cycling, including other devices such as scooters, push bikes, roller skates;
- School sporting activities – cross country, walk-a-thons, traffic education; and
- Fitness – Training circuits and obstacles, "Toughen Up" challenges, Triathlon, cycling and running events.

The site is located at the end of Inverell's public footpath/bicycle path providing an extension of this in an environment protected from general traffic. The Circuit will also complement the adjoining facilities and uses at Lake Inverell.

The operation of the Circuit for general day-to-day public use and specific activities will utilise the parking and amenities at Lake Inverell. It is intended to limit use to daylight hours only to respect the amenity of neighbouring dwellings. There will be no circuit lighting proposed.

Some special event and overflow parking has been considered and provided for within the design, all of which are contained within the site and will be managed through locked gates to ensure minimal impact on traffic and amenity.



## **OPPORTUNITY TO COMMENT**

The development does not require consent through the Development Application process; rather a Review of Environmental Factors (REF) will be completed in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979*.

Inverell Shire Council would like to extend the opportunity for you to review and comment on this proposal prior to completion of an REF.

Written comments will be received up until 4.30pm, 16 October, 2018 and can be submitted via post to the General Manager, PO Box 138, Inverell NSW 2360 or email to [council@inverell.nsw.gov.au](mailto:council@inverell.nsw.gov.au).

If you wish to discuss the proposal, require clarification or need any further information, I can be contacted on 0425 271 633.

Yours faithfully



**ANTHONY ALLISTON**  
**MANAGER DEVELOPMENT SERVICES**

**Encl.**

\*Site plan



# **Submissions**

2 x online submissions

Inverell Times article

2 x written submissions

## Online Submission: Inverell Off-Road Recreational Circuit

### Entry

Name:

Last:

Email Address:

Telephone:

Comments / Feedback:

I think the proposed off road path at the lake is such a fantastic idea. The lake is one of the best things in Inverell. I walk the path around the lake every second day with my son in a chest/backpack carrier. I tried to take the pram but it was too rocky. He is getting bigger and heavier and i soon wont be able to carry him anymore. A path that is pram and wheelchair friendly will be wonderful. It would be a great place for mothers groups to have a walk and a picnic.

File Upload:



20180517\_141216.jpg

Submit my comment / feedback:

Yes

Comments/Notes

### Entry Details

Published on: Sep 17, 2018 @ 12:40

Entry ID: 129

Entry Key: mur2j

### User Information

IP Address: 1.144.108.64

Browser/OS:

Google Chrome 4.0 / Android

Referrer:

<https://inverell.nsw.gov.au/my-say/inverell-off-road-recreational-circuit/>



## Online Submission: Inverell Off-Road Recreational Circuit

### Entry

Name:

Last:

Email Address:

Telephone:

Comments / Feedback:

Hi ISC,

When I visited Melbourne last I was visited this playground next to the the children's hospital.

<http://www.melbourneplaygrounds.com.au/melbourneplaygrounds-info.php?id=51620>

Perhaps an area such as this within the recreation circuit to get children, even adults, active!

Thank you

Anthony

File Upload:

Submit my comment / feedback:

Yes

### Comments/Notes

### Entry Details

Published on: Oct 16, 2018 @ 14:52

Entry ID: 143

Entry Key: cqkhj

### User Information

IP Address: 1.144.109.194

Browser/OS:

Google Chrome 69.0.3497.100 / Windows

Referrer:

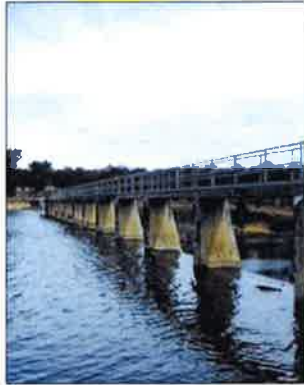
<https://inverell.nsw.gov.au/my-say/inverell-off-road-recreational-circuit/>

# OPINION

inverelltimes.com.au/opinion

## FIRST PERSON || ARTHUR MACALPINE

# Close dissection of the Lake Inverell Project



**C**URIIOUS. I stepped into the Council Chambers one day last week to see whether there was a pamphlet or something about council's plans for the Lake Inverell Reserve. There wasn't, but I was courteously and helpfully spoken to by one of the staff who had come out to the counter. He gave me a map.

The map showed a sealed circuit, maybe a kilometre long and 6 metres wide. Two car parks were shown and these are meant to be locked when not in use for some sort of event. At present the two high schools and Ross Hill Public hold their cross countries at the sporting complex. (Inverell Public uses its own grounds and Rugby Park).

Talking to a councillor later, he mentioned that the Criterion following the Grafton to Inverell cycle race could be held there and this would avoid having to close the streets.

Now, all of these events are held only once a year and there seems to have been no crying out for facilities to which to hold them and the idea of having a specially built tar road circuit almost the same width as our country roads doesn't seem very 'cross country' or fit in with the idea of a reserve.

And asking the people who gather to watch the finish of 'the Grafton' and to enjoy the stalls and music, to then be asked to traipse up to the Lake Inverell Reserve seems a bit ambitious.

If the same logic was applied to the Sapphire City Festival parade and the Anzac Day march where would we be then?

Another suggested use of the proposed area is that parents could take their children there to ride their bikes or to amuse themselves by riding around and round for fun. Possibly? - Yes. Probably? - No.

Kids would probably learn to ride their bikes and use them in much the same way as they have always done. And go all the way up there to ride round and round - seldom. Maybe more often and more interesting if the town's bike cum walking network was extended. Any ideas about where?

The councillor I spoke to also said that preliminary clearing and putting in of stakes to mark the course of the sealed circuit had already been done.

It may also be useful to remember that Inverell had a cycle circuit at the Sporting Complex but it was seldom used and eventually demolished.

Inverell's Lake Inverell is a tranquil, accessible and unique asset. Can you think of another town with something like it? Let's reserve Lake Inverell Reserve by sensitively managing and maintaining it.

## LETTERS: UNSTOP-ABILITY

### Inclusive and uplifting experience for all involved

**I** WANT to take a moment to give thanks to the participants and supporters of the recent Unstop-Ability performance in the Inverell Town Hall on September 19 and 20.

We had over sixty performers involved in the production of varying ages and abilities, and as the Inverell Times has most clearly shown in their coverage of the event, it was a truly inclusive and uplifting experience.

Thank you to Naomi Shumack of *The Inverell Times* for providing us with such consistent, unwavering support.

Obviously such a success is the result of a whole team of people pulling together for this common goal, whether it was the Inverell RSM who provided rehearsal space for free in the lead up to the event, or Inverell shire Council through the assistance of Alice Holten and Kristy Paton who could not have been more helpful.

To the staff and students of Holy Trinity school who shared their time, resources and bus service to help our performers get there.

A big congratulations to the Dramatics, our core acting group who have rehearsed all year in the hope of this event.

Thanks must also go to Karen Ludwick and the staff and students of Inverell High Support Unit, and Deb Johns and the staff and students of Ross Hill Support unit, who saw the opportunity and committed to the effort it would mean to bring it to fruition.

I want also to commend the actors and families from Drama Dreams who willingly came on board this whole adventure and



The Inverell town hall was packed full of eager locals ready to watch the performance.

pitched in with help on costumes and props, plus a special mention to the brave couple who took on the illuminated stick figure costumes - Pam and Rusty Holten - and lived to tell the tale.

To the Danthonia Bruderhof Community for providing the supper, to the Clontarf boys who assisted with the event, to Uncle Kelvin Brown who provided the Welcome to Country, we are enriched and blessed by your involvement in our journey.

Lastly, I am forever grateful to Steve Lambert for providing the initial cash that enabled us to dare to dream, and to Michele Jedlicka, Robbie Duff and the whole organisation of Best Employment Community Connections who sourced the grant, won it, and allowed our guys to live the dream.

And to all of you who turned up to watch - you packed out the Town Hall, twice!

Thank you so much Inverell. It was a magical experience, and we couldn't have done it without you.

Stephanie Marshall, Director

### A HUGE CONGRATULATIONS

Congratulations to Stephanie Marshall and the Unstop-Ability performers for a spectacular show!

The evening was fantastic and we greatly enjoyed it.

Well done to all involved, was a wonderful display of joy and ability. Hope to see another in the future.

Janatha McKay  
Inverell

*The Inverell Times* welcomes letters and comments from local community members and visitors passing through. Letters sent in may be published online and/or in the newspaper.

Your submission may be edited prior to publication and a correct email and telephone number must be entered for verification purposes. Only your name and suburb will be published. Letters can be dropped into the office or filled out online at [www.inverelltimes.com.au](http://www.inverelltimes.com.au).

## LETTERS

### REMEMBERING CLARENCE MOORE

Just three years ago I learnt that I had a great uncle, Clarence Moore, who enlisted in the First World War in Inverell and travelled to foreign lands for King and country. He was killed at the small town of Bony in France on the 1 October 1918, days before the war in that area ended. He was a boy from Gum Flat, and I wrote to the Inverell sub branch of the RSL some weeks ago and asked them to assist me in placing a wreath on the Inverell war memorial on the centenary of his death as I would be overseas. I am writing to thank the sub branch, particularly Tracey Collins, and Ann Hodgins OAM, of the Kurrajong Committee, for their response to my request. I have been overwhelmed with their support and that of their members, and I have been humbled by their efforts. My intention was that Clarries bravery and sacrifice would not be forgotten. I am now certain that his death will not pass without appropriate recognition. I have since learnt much more about Clarries and his brother Normans service to this country, and I feel indebted to them for their efforts and all those who served.

I would be pleased for my gratitude to be passed on to those members of the Inverell community who have assisted in my original request, and assure them of my sincere gratitude. As a retired police officer of 36 years service I am more than aware of the need to remember those who have paid the ultimate sacrifice in the protection of our values and the freedom we enjoy. I hope in some small way the laying of a wreath on the 1 October will be a time for reflection and recognition of all those who served, and those who now lay in foreign lands.

An Inverell boy not forgotten.

Grag Moore APM, Chief Superintendent (retired)

### MACINTYRE LIONS CLUB MINI LOTTO

The results of the Inverell Macintyre Lions Club Mini Lotto draw last Saturday are as follows: no winners from the draw and the new jackpot is \$3090. This week, ticket buyers are asked to pick 6 numbers from 19 numbers. Numbers drawn out last Saturday were: 12 - 18 - 14 - 09 - 17 and 08.

## CONNECT WITH US

**EMAIL**  
Send letters to  
[inverelltimes@fairfaxmedia.com.au](mailto:inverelltimes@fairfaxmedia.com.au)

**PHONE**  
Call us  
(02) 6720 0100

**SOCIAL**  
[facebook.com/InverellTimes/](https://www.facebook.com/InverellTimes/)  
[twitter.com/inverelltimes](https://twitter.com/inverelltimes)

**POST**  
PO Box 5,  
Inverell,  
NSW, 2360

The Inverell Times welcomes letters to the editor. Contributors to guest events and letters of 250 words or less. Letters should include the name and address of the author and a phone number for clarification. Only the author's name and address will be published. Requests for anonymity will be considered. Letters may be edited for space, clarity, legal reasons and may be published on our website.

Mr Paul Henry  
General Manager  
Inverell Shire Council  
E: [council@inverell.nsw.gov.au](mailto:council@inverell.nsw.gov.au)  
10 October 2018

**RE: Off Road Recreational Circuit, Lake Inverell Drive, Inverell –  
Submission of Comments/Concerns**

Dear Mr Henry,

We thank you for the Council's correspondence dated 6 September and the willingness of your team, Brett and Anthony, to meet with myself regarding the proposed development. I commend Inverell Shire Council on its progressive focus on the development and improvement of recreational opportunities and facilities for the community. The concept of the Off Road Recreational Circuit along Lake Inverell Drive is a project that my husband and I consider to be an enhancement to such initiatives. However, as residents of Lake Inverell Drive we hold some critical concerns and objections and wish to raise these accordingly, prior to the completion of the REF.

**Environmental Concerns**

- **Koalas.** There is a local, sighted Koala population and significant other native fauna in and adjoining the proposed development footprint. With the completion of the REF we expect the impact of the proposed development will be duly reviewed and risk assessed and managed in all design considerations.

**Traffic Management Concerns**

- **Proposed Car Parks.** The two (2) depicted car parks raise numerous concerns.
  - **Pedestrian risk and safety** as vehicles entering and exiting the depicted proposed car parks cross over the existing cycle and pedestrian footpath. I respect the feedback provided by Council staff that this is not anticipated to be utilised any greater than a few times per year, and there would be a responsibility on events coordinators to manage vehicle access, the frequency of use or onus of responsibility does not diminish the risk to personal safety for an already established cohort of cycle/pedestrian path users.
  - **Traffic Management and Congestion.** Channelling event specific and Off Road Track user traffic along Lake Inverell Drive, as proposed, during already peak periods (weekends, holidays) is potentially compounding an already congested traffic flow and further exacerbating traffic management concerns. Presently, on any given weekend the existing car park accessing Lake Inverell, at Darryl Barns Park, is at capacity. The informal nature of the traffic management plan lends itself to regular and extended traffic congestion, vehicles banked up, and near misses as patrons seek to enter or exit. Adding additional car parking, entries and exits, to the mix without adequate consideration and planning will result in untenable traffic congestion for recreational users.
  - **Gwydir Highway Intersection.** The intersection of Lake Inverell Drive and Gwydir Highway is one that has witnessed some major traffic accidents and near incidents. It is an 80km zone with traffic currently feeding from Lake Inverell Drive residences, Lake recreational users and Kingfisher Drive estate residences. Funnelling additional vehicles from the proposed car parks for the Off Road Track will only heighten the risk for all road users.
  - **Unauthorised Access to Carparks.** I am concerned, given the area is already a regular haunt for provisional drivers and larrikin behaviour that an unlit car park, with only a

locked boom gate will lend itself to undesirable activity. Whilst discussing this with your team it was noted that the installation of bollards along the Lake Reserve contour bank may be an added deterrent, I am doubtful it will eliminate or even reduce such antisocial behaviour.

#### **Location of Car Parks.**

- Car Park entries and exits, as depicted in the proposed plan, are directly opposite semi rural/acreage residences. Whilst the correspondence indicates there is no intended night time usage proposed, this cannot be excluded. Assuming the car parks are only utilised during major events, as indicated yet not guaranteed, this would mean a mass exodus of patrons generally at or around the same time, either in daylight or at night. Thus potentially imposing on the opposite residences, of which mine is one. We purchased our semi rural holding some 3.5 years ago, and in doing so considered the likely potential for the vacant reserve opposite. Our decision was made after careful consideration and observation of the traffic and impact of the existing Lake usage, over a 3 month period. In meeting with Brett and Anthony, they indicated Council considered residential development of the proposed vacant land, which I remarked would have been a preferential option considering the extent of planning and infrastructure that would have needed to be undertaken by Council to this end and the diminished likelihood that our privacy would have been impinged by traffic directly into our living areas. It was also noted that Council would consider redirecting the larger sealed carpark entry/exit points to link in with the adjoining Darryl Barnes Carpark, however this then imposes on the rural residence on the opposite side of the lake, should vehicles be under headlights.
- In meeting with Council management I suggested consideration be given in the design for the car parks to be centralised and located immediately off the Gwydir Highway, accessing in much the same way as the clay target club accesses their facilities, thus eliminating the risks to cycle and pedestrian traffic on the existing path, eliminating the traffic congestion and management concerns and eliminating the imposing potential on the privacy of semi rural/acreage residences. I was of the understanding this would not be considered as Council was looking to co-locate parking with existing Darryl Barnes amenities and facilities. Given the geographic expanse of the track, I am not convinced the location of parking to an existing two suite septic toilet block should be a determining factor. Whilst I respect budgetary considerations, I suspect the establishment of a single car park off the Gwydir Highway with the inclusion of an amenities block would have merit, especially given access to existing sewerage infrastructure. The town mains sewerage does not extend beyond the Fossicker Caravan Park. With the proposed Lake Inverell Boardwalk development and potential growth of visitation it would be questionable whether the existing Darryl Barnes amenities would adequately cater also for the Off Road Track patronage and events.

I thank you for your consideration of my comments and concerns and make these without prejudice. Should you wish to discuss these further, please do not hesitate to contact me.

Yours sincerely



*Outline of an "address to council" Did not deliver the address*

## **THE LAKE INVERELL RESERVE PROJECT**

\* 528.7.16/63

*because it was too late when I found out meeting times 26/9/18*

Repeating - Thanks to the council and our local member for putting \$2.2 together for the Lake Inverell Reserve. That's quite a pocket full of cash isn't it? It will be spent in the town and most of it will be spent again as people get paid and a lot of that will be spent again and so on. It's beginning to sound like \$2.2 times 2 or maybe even \$2.2 times 3. And in the end we'll be left with a valuable asset that will last for decades.

It's great isn't? But it's quite a challenge too. The people to make sure that the money is not only spent but well spent are us, citizens and our representatives. Very few of us have travelled around and seen other places that might compare with the Reserve and I don't see too many experts here either. We'll have to look and listen, ask questions and learn. Maybe there are a few experts in town or not too far away. Maybe somebody at the Soil Con, or Rural Services down near the taxi rank, possibly National Parks over at Glen. Even a travel consultant (but I don't think so.) The thing is to keep an open mind and if they're there to talk to, talk to them.

After reading the Times article a couple of weeks back I came into the council chambers to ask about what is being planned, Maybe they had a map or something. The man I spoke to was courteous and helpful, and he actually did print out a map for me. I was a bit startled by what it showed though. There was a sealed circuit, maybe a kilometre long, on the eastern side of Lake Inverell Drive and two parking areas to be locked when not in use. The circuit would be nearly as wide as a country road and the parking areas hinted at crowds of spectators coming into what is basically a tranquil reserve area. Two uses were mentioned for the circuit, cycling and the venue for cross country runs by Ross Hill Public and the two high schools. (Inverell Public uses its playground and Rugby Park) Up till now the cross countries are once a year events using the eastern end of the Sport Complex beyond the Showground. Council built a cycling velodrome years ago but it fell into disuse and was demolished.

There were also a couple of ideas on the map that could hardly worry anybody. One is to make a place where it will be easier to launch kayaks and canoes. It includes a little jetty I think. These activities fit in well with the unique and tranquil character of the reserve and have been going on for quite a long time. It may also be worth considering a landing place at the very far end of the lake almost 3 k upstream, just a simple slope up the bank. Some kayakers were in the habit of going early Saturday or Sunday mornings to enjoy a cuppa, or have breakfast. Construction would be simple and maintenance virtually nil. Heinrich or Robyn Cameron may be worth talking to about this. And a third thing on the map was for a short section of elevated board walk for people in wheel chairs.

It would also be useful to consider resurfacing the present walking track. This track is very well sited up the slope where it gives very pleasant views, a foreground down to the water, across the lake with its water birds to the rising land beyond. If this track had actually been down closer to the water you would hardly be able to see far beyond where you are standing and you might disturb some of the wildlife that you've come to see.

The main, tarred walking track that I have just been talking about actually continues a long way beyond the part that was tarred. It goes all the way along the eastern shore and ends up beyond the next bend in the river. There is a seat there which might be upgraded to another small picnic shelter like those near the present car park or the one

P.T.O.

## THE LAKE INVERELL RESERVE PROJECT

near the end of the presently sealed track. Up near the end of this extended track there is the possibility of seeing a platypus

Those two tracks just mentioned would only need to be a couple of metres wide, maybe less and a tarred surface might fit into its surroundings better than concrete although it would probably need more maintenance. Both tracks are already used by strollers and bikes but a better surface would be a vast improvement.

I can also suggest three extensions to the existing track to the tracks mentioned above.

One of the other possibilities in the area may be the erection of signs near the seats of shelters. These signs could be made to fit in fairly well with the natural surrounding and they might have the names and pictures of some of the water birds. People would probably like to know the difference between a coot, a water hen and a grebe, etc. If the signs faced south and had a suitable surface they may last a long time.

Finally, if council is really ambitious it may consider extending the walk and cycle network from Northey Lookout up to the Reserve. A possible route could be to go down Moore Street and then make a track along the northern bank of the river to the existing entrance to the Reserve. One of the major problems of this suggestion is the lack of connection between Bennet St and Moore St

This "address to council" outline has  
already been given to Paul Harmon &  
Anthony Richard — also to Di Parker should  
get one from a person running her shop.  
Please pass on a copy to other councillors  
and invited staff. (Anthony Alston may  
be one of these)

## **APPENDIX F – Assessment – Is an EIS Required?**

## **ASSESSMENT - IS AN E.I.S. REQUIRED**

The purpose of this assessment is to determine whether an Environmental Impact Statement (EIS) is required for the proposed activity described below.

**Activity:** Inverell Off-Road Recreational Circuit "Recreation Facility – Outdoor"

**Location:** Lot 10 DP 252287 and Lots 1 & 2 DP 1101540, Lake Inverell Drive

Section 228(2) of the *Environmental Planning and Assessment Regulations 2000* set out what factors must be taken into account when determining whether an EIS is required.

<b>Matter for Consideration</b>	<b>Comment</b>
(a) Any environmental impact on a community	The proposed Off-Road Recreational Circuit is a low impact facility, being used primarily by cyclists and walkers during daylight hours. Suitable mitigation measures can be implemented during construction. Overall, the activity is not considered to have a significant environmental impact on the community immediately surrounding the proposal or the broader community.
(b) Any transformation of a locality	The locality is comprised of residential land, recreational areas, the National Park and shooting ranges.  The proposed Off-Road Recreational Circuit is consistent with these uses and won't transform the locality.
(c) Any environmental impact on the ecosystems of the locality	The primary ecosystems in the locality are aquatic (Lake Inverell and Macintyre River) and terrestrial (primarily Barayamal National Park).  Given the separation distance and proposed fencing, the Off-Road Recreational Circuit is not considered to adversely impact these ecosystems.
(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality	The primary qualities of the Lake Inverell Reserve are considered to be recreational (passive and active) and environmental. The proposed Off-Road Recreational Circuit promotes recreational use of the area. In regards to environmental values, the circuit has been located and designed to minimise the impact on the environmental qualities of the area. The circuit is separated and will be fenced from the high value environment contained within Barayamal National Park.
(e) Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future	An Aboriginal Cultural Heritage Assessment has been undertaken for the Off-Road Recreational Circuit. This assessment, including a field survey, has identified the presence of some stone artefacts. It is recommended that these artefacts be relocated, which is supported by the Local Aboriginal Land Council. The relocation will require an Aboriginal Heritage Impact Permit, which is acceptable.



generations	
(f) Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i> )	<p>An ecological assessment has been completed by an ecologist for the proposed Off-Road Recreational Circuit.</p> <p>No protected fauna has been identified, or considered likely to occur, on the site of the Off-Road Recreational Circuit. Suitable mitigation measure will be implemented in the case of fauna or suitable habitat (e.g. hollows) being found during construction.</p>
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air	<p>The ecological assessment undertaken by the ecologist, determined one species (Austral Toadflax) was likely to occur on the site of the Off-Road Recreational Circuit.</p> <p>To determine the potential impact on Austral Toadflax, a Five-Part Test of Significance was undertaken in accordance with Biodiversity Conservation Act 2016. This test of significance determined that given the scale of the proposed works, the greater extent of habitat available in the locality and proposed mitigation measures, the proposed Off-Road Recreational Circuit is unlikely to result in a significant impact on the local occurrence of Austral Toadflax.</p>
(h) Any long-term effects on the environment	<p>The Off-Road Recreational Circuit will be primarily used for cycling and walking, both low impact recreational activities. The Circuit will be fenced from the broader reserve and Barayamal National Park, limiting the location of users. Overall, the long term effects on the environment are considered to be minimal.</p>
(i) Any degradation of the quality of the environment	<p>The Off-Road Recreational Circuit has a small footprint in the context of the greater Lake Inverell Reserve. Fencing will be undertaken around the Circuit, which protect high quality areas (e.g. National Park). The activity is not considered to result in any significant degradation on the quality of the environment.</p>
(j) Any risk to the safety of the environment	<p>The proposed Off-Road Recreational Circuit is not considered to result in any significant risk to the safety of the environment. The circuit is intended for daylight use only and suitable passive surveillance of the circuit will be available.</p>
(k) Any reduction in the range of beneficial uses of the environment	<p>The site of the Off-Road Recreational Circuit is part of the Lake Inverell Reserve, which is identified for recreational uses (walking, cycling, etc.). The proposed Off-Road Recreational Circuit is considered to be a suitable use of the reserve and wont result in any reduction in the range of beneficial uses of the environment.</p>
(l) Any pollution of the environment	<p>The use of the Off-Road Recreational Circuit is unlikely to result in ay significant pollution. Potential pollution from construction (e.g. dust, erosion, etc.) can be minimised through the implementation of standard mitigation measures.</p>
(m) Any environmental problems associated with the disposal of waste	<p>All construction waste can be disposed at the Inverell landfill. Minimal waste is considered to be generated by users of the Off-Road Recreational Circuit. The Off-Road Recreational Circuit is not considered to have result in any significant problems associated with the disposal of waste.</p>

(n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply	The construction of the Off-Road Recreational Circuit will require the use of gravel resources; however, these are not considered to be significantly impacted.
(o) Any cumulative environmental effect with other existing or likely future activities	<p>The Lake Inverell Reserve is currently used for recreation. It is highly likely that this recreational use will continue for the foreseeable future.</p> <p>There is potential for increased residential development to the west of the Lake Inverell Reserve. It is considered that a recreational facility is an appropriate and supportive use, adjacent to a residential area. Furthermore the Lake Inverell Reserve, including Off-Road Recreational Circuit, provides a transition between future residential areas and Barayamal National Park.</p> <p>Additional works are proposed at Lake Inverell, including the construction of a board walk and kayak launching facility. These are consistent with the use of Lake Inverell and support existing activities. A separate Review of Environmental Factors will be undertaken for those works.</p> <p>Overall, the proposed Off-Road Recreational Circuit is considered to a suitable use for the Lake Inverell Reserve is not considered to have an adverse cumulative environmental effect with other existing or likely future activities.</p>

### Conclusion

Based on the above assessment, an Environmental Impact Statement **is not** required for the proposed activity.



CHRISTOPHER FALEY  
DEVELOPMENT PLANNER