



MikeSvikisPlanning
Experience/Commitment/Quality



Report on a Public Hearing into the Proposed Reclassification of Council Land being the Ballina Quays Canals, Banyanda Lake and Land at Old Bagotville Road, Wardell

**Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals (BSCPP13/008);
Lot 50 DP 259593, Banyanda Lake, Ballina (BSCPP13/008);
Lot 5 DP 843369, Old Bagotville Road, Wardell (BSCPP13/007)**

Prepared for Ballina Shire Council
by MikeSvikisPlanning
18 December 2013



Mike Svikis
Principal Planner

MIKESVIKISPLANNING

ABN 84638645183

3 Gibbingbell Close Ocean Shores 2483

Mob: 0447 805 871

Ph: (02) 6680 1003

E: mikesvikisplanning@bigpond.com



CONTENTS

Introduction	4
Objectives of the Public Hearing	4
The Independent Chairperson	4
Background	6
Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals, Ballina and Lot 50 DP 259593, Banyanda Lake, Ballina	6
Lot 5 DP 843369, Old Bagotville Road, Wardell	7
Public Hearing	9
Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals, Ballina	9
Lot 50 DP 259593, Banyanda Lake, Ballina	13
Lot 5 DP 843369, Old Bagotville Road, Wardell	13
Appendices	18



Introduction

Mike Svikis (Principal Planner at MikeSvikisPlanning), was engaged by Ballina Shire Council as an independent chair for a public hearing into the proposed reclassification of certain land and water bodies in Ballina and near Wardell.

The public hearing was held on 11 December 2013 at the Richmond Room in Ballina. Verbal submissions were made on both the land at Wardell and the water bodies at Ballina. This report summarises the submissions and provides a response to them and recommendations to Council.

Council will consider this report in making its deliberations on the subject land.

In preparing this report I have also reviewed the information that Council placed on public exhibition and the written submissions to the exhibition. With Council officers, I inspected the land at Wardell and the water bodies at Ballina on 21 November 2013. The photographs in this report were taken at that time.

Objectives of the Public Hearing

The objectives of this public hearing are to:

- Satisfy legislative requirements relating to public land reclassification
- Provide an opportunity for any person to make a verbal submission
- Enable those submissions to be considered by an independent chairperson who can then prepare a report and make recommendations on those issues to Council.

'Public land' is any land (including a public reserve) vested in, or under the control of, Council (with some exceptions such as roads). 'Community land' is public land that is generally open to the public, eg parks, reserves or sports grounds. 'Operational land' is public land that may be used for other purposes, eg a works depot or held as a temporary asset. All public land is either Community or Operational (NSW DoP Practice Note PN 09-003).

Changing land from one classification to another can be undertaken through a planning proposal under the Environmental Planning and Assessment Act 1979. When it is changed the classification status of the land is recorded in a schedule in the Local Environmental Plan. When Community land is proposed to be reclassified as Operational land a public hearing must be held at some time after the close of the exhibition period of the planning proposal.

The Independent Chairperson

The public hearing must be chaired by an independent person. The Local Government Act 1993 states in relation to this:

47G Public hearings

- (1) In this section, **public hearing** means any public hearing required to be arranged under this Part.
- (2) The person presiding at a public hearing must not be:
 - (a) a councillor or employee of the council holding the public hearing, or



- (b) a person who has been a councillor or employee of that council at any time during the 5 years before the date of his or her appointment.*
- (3) Not later than 4 days after it has received a report from the person presiding at the public hearing as to the result of the hearing, the council must make a copy of the report available for inspection by the public at a location within the area of the council.*

This public hearing was chaired by Mike Svikis who is not a Councillor or an employee of Ballina Shire Council now or at any time in the past.



Background

The planning proposal for Ballina Quays Canals and Banyanda Lake was commenced by Ballina Shire Council at its Ordinary meeting of 22 August 2013. It proposed that the land on which these waterways are located should change from Community to Operational under the Local Government Act 1993 (LG Act). No change of zoning was proposed.

The planning proposal for Lot 5 DP 843369 at Old Bagotville Road, Wardell was commenced by Ballina Shire Council at its Ordinary meeting of 20 December 2012. It proposed that this land change from Community to Operational under the LG Act. No change of zoning was proposed.

Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals, Ballina and Lot 50 DP 259593, Banyanda Lake, Ballina

The land containing Banyanda Lake (Lot 50 DP 259593) has an area of 1.97 hectares and the land containing the Ballina Quays Canals (Lot 63 DP 263861 and Lot 132 DP 775228) has a combined area of 9.37 hectares.

All three parcels are in the ownership of Ballina Shire Council and are classified as Community land. The purpose of this planning proposal is to enable the reclassification of the land to Operational land in accordance with the requirements of the LG Act.

All the subject lots are located fully within the W2 Recreational Waterway zone under the provisions of the Ballina Local Environmental Plan 2012 (BLEP 2012). No amendments to the current zoning arrangements under the BLEP 2012 form part of this planning proposal.

This planning proposal seeks to reclassify the entire area of Lot 63 DP 263861 and Lot 132 DP 775228 (Ballina Quays Canals) and Lot 50 DP 259593 (Banyanda Lake) from Community land to Operational land under the provisions of the LG Act. This involves the amendment of Schedule 4 of the BLEP 2012 to incorporate reference to the reclassification of Lot 63 DP 263861, Lot 132 DP 775228 and Lot 50 DP 259593.

Council advised that a review of the management provisions applying to public Community land, and specifically the subject lots detailed above, revealed that the placement of private structures on Community land is inconsistent with the statutory management provisions of the LG Act. This has also highlighted potential public liability for Council in relation to the placement of such private structures on land for which it has management responsibility in accordance with the LG Act.

Council considers that section 47D of the LG Act requires that the private, exclusive use of community land may only be by way of a lease, licence or other estate. A lease, licence or other estate for the use of Community land is limited to purposes that meet the current and future needs of the community and wider public such as public recreation and those that promote the physical, cultural, social and intellectual welfare or development of persons. As such, the current private structures placed in the subject waterways cannot be issued with a lease, licence or other estate because they are inconsistent with the requirements of the LG Act.

Council's solution for rectifying the above matter and enabling the private waterway structures to be made consistent with the LG Act is to reclassify the subject land from Community land to Operational land. This will allow Council, in the first instance, to make the structures consistent with the LG Act through removing the application of the specific management requirements of the Act. Subsequently, it will allow Council to further consider its options with regard to managing and regulating the placement of the structures through leasing and/or licensing.

The NSW Department of Planning and Infrastructure issued a Gateway Determination on 6 September 2013. The draft planning proposal was publicly exhibited and approximately 75 submissions were received.



Figure 1: Ballina Quays and Lake Banyanda in Ballina

Lot 5 DP 843369, Old Bagotville Road, Wardell

Lot 5 DP 843369 has an area of 50.53 hectares and is in the ownership of Ballina Shire Council. The land is classified as Community land for the purposes of the Local Government Act 1993 (LG Act). The purpose of this planning proposal is to enable the reclassification of the land to Operational land in accordance with the requirements of the LG Act.

Part of Lot 5 DP 843369 is zoned RU2 Rural Landscape under the provisions of the Ballina Local Environmental Plan 2012 (BLEP 2012) with the remainder of the site being “deferred matter”. This land is identified as deferred matter under the BLEP 2012 due to the proposed application of the E2 Environmental Protection Zone to the land under this plan. The Ballina Local Environmental Plan 1987 (BLEP 1987) applies to the area identified as “deferred matter”. This area is zoned part 1(b) – Rural (Secondary Agricultural Land) and part 7(l) – Environmental Protection (Habitat) under the provisions of the BLEP 1987. No amendments to the current zoning arrangements under either the BLEP 2012 or BLEP 1987 are proposed as part of this planning proposal.

This planning proposal seeks to reclassify the entire area of Lot 5 DP 843369 from Community land to Operational land under the provisions of the LG Act. This will involve the amendment of Schedule 4 of the BLEP 2012 and Schedule 7 of the BLEP 1987 to incorporate reference to the reclassification of Lot 5 DP 843369.

Lot 5 DP 843369 was acquired by Council in 1996 for its potential as an extractive resource and future landfill site. Due to the land being acquired after auction by negotiation, Council was unable to comply with the legislative requirements applicable at the time in relation to the classification of the land as Operational land. As such, the land has been classified as Community land in accordance with the provisions of the LG Act.

Council considers that the physical and geographic constraints of Lot 5 DP 843369 mean it has limited use for future Community land uses. As such, to enable Council to consider its options with regard to the sale, lease and/or use of the land, it is considered that the Operational land classification is more appropriate for the land. Commercial uses of the land could include quarrying operations. In addition to the above, the preferred route of the Pacific Highway Upgrade (Woodburn-Ballina Section) traverses Lot 5 DP 843369. The reclassification of the land to Operational land will support liaison with Roads and Maritime Services with regard to the acquisition of the land required for the highway upgrade.

The NSW Department of Planning and Infrastructure issued a Gateway Determination on 6 September 2013. The draft planning proposal was publicly exhibited, and three public submissions and four government submissions were received.



Figure 2: Lot 5 DP 843369, Old Bagotville Road, Wardell

Public Hearing

The Public Hearing was held on 11 December in the Richmond Room at Ballina. It commenced at 6.00 pm with submissions on the land at Old Bagotville Road, Wardell, and this matter was dealt with until 6:55 pm. At 7.00 pm the hearing re-commenced with submissions on the waterways at Ballina, and this was completed at 8:15 pm.

Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals, Ballina

Fifty-two persons in attendance, four Council staff, Mike Svikis is the presiding officer.

Introduction by Steve Barnier, including a welcome to country. He provided details of the planning proposal and advised that maintenance of the canals was not part of the proposal being considered. Steve also clarified that maintenance would not be affected by the reclassification and that Council had made no decision in relation to possible charges referenced in Council's [August 2013] report.

Mike Svikis advised how he would manage the hearing with those registered being given first opportunity before opening the floor to others in attendance. Mike outlined his approach to the hearing, advising that he would be primarily listening to the issues raised and then reporting on those issues to Council. The night was not a general question and answer session, and he asked speakers not to repeat the issues or matters raised by others as he was well aware that some of the issues were of concern to many in attendance.

David Kirsh commenced at 7.15 pm. He has read the reports and information on the proposal. His main question – cannot see why it is illegal to have pontoons on public land. He cannot see why these cannot be placed on Community land. The law changed 10 years ago and new structures have been added since then with Council approval with the Local Government Act in place. He does not know which part of the LG Act makes the pontoons illegal. The only way he can see the reason for the reclassification is to allow the Council to start charging a levy on land owners for the structures. He can see from research that the land was gifted to the Council and must be classified as Community land and that it cannot be reclassified. Operational land is only land not open to the public like a works depot. He is concerned that if the land is reclassified it will be closed off to the public. Will the public still be able to use the land if reclassified?

Nick Reimer commenced at 7.20 pm. He feels hampered by the instructions given as to what he can and cannot say at this hearing. He has lived on the quays for about 10 years and bought his land/house after making enquiries in relation to establishing a pontoon, boat ramp and retaining wall on the land, all of which have been done with lawful approval by the Council and constructed by a master builder. He would not have purchased the property if he could not have done these things. In relation to estuaries [Crown waterways], he found the quays appealing as they do not have the same licence charges as the estuaries [Crown waterways]. He was advised at the time of purchase that there would be no charges on the structures. In relation to maintenance he raised matters relating to previous Council commitments to maintain the waterways and keep public access. In 2008 there was a proposal for a special rate policy that was unsuccessful. Based on early documentation in development files, the justification for the quays' maintenance by the Council is based on the higher rates paid on the quays' properties, which were considered sufficient to defray the maintenance costs. The reclassification lays the groundwork for Council to start charging land owners and this will affect land values. It is difficult to sell these properties and the possible charges will make it worse. Are all these structures now illegal? He raised section 47D of the LG Act and is of the view that no land owner has exclusive use of the waterway. The adjoining land owners share the waterway with members of the public, and the land is a public reserve with access to the public provided by adjoining parks. He raised section 30(1) of the LG Act where reclassified land ceases to be a public reserve. There are unfortunate consequences of the reclassification. The Council has been party to the erection of the illegal structures. Many of the structures are unused or not maintained and some may seek the removal of the old structures. He strongly objects to the reclassification.



Dan McOmish commenced at 7.30 pm. He is a semi-retired solicitor and has worked both for and against councils in legal matters for 30 years. He believes the reasons for the reclassification are the management of the private structures, the regulation of the private structures, compliance with the LG Act and the legality of the structures. In his written submission he has stated that he believes the structures can be legally approved under the LG Act. The concept of exclusive use is incorrect and that approval has never been granted by Council for exclusive use, thus the concept has no application. The issue can be fixed by a management plan as required under the Act; it can also be fixed by regulation, and the local member [Don Page] could achieve this by a stroke of a pen. He is concerned with the philosophical issues of the reclassification of Community land. Desires to keep Council out of publicly used land; this land should not be used as a fund raising mechanism for the Council. The land is for public use, not just for those land owners adjoining the canal. The land is also a drainage reserve. The provisions in the LG Act regulate activities on public land and this is not addressed in the Council's submission. In the LG Act there are a number of provisions relating to what a Council can and cannot do, and also in relation to public safety. The Council is enabled under the LG Act to issue orders and notices for defective structures. The Council can raise charges for structures over public land. There are sections of the LG Act that indicate you can place private structures on public land. He asked whether Council will disclose to the public its legal advice in relation to this matter? Has this advice been obtained independently by an expert in LG law? The reclassification of Community land leads to consequences, such as tampering with sporting fields, alienation and commercialisation of public open space. When the quays were approved they had a condition applied that required the dedication (Condition No 3) of roads, waterways and parklands to Council. The reclassification needs to do more than stated in the Council report. He referenced section 32 of the LG Act in relation to dedication of land under section 94 of the Environmental Planning and Assessment Act. In section 30 it provides that the Council can only reclassify this land if it is found to be unsuitable for its intended purpose. Council has various mechanisms under the LG Act to raise fees, charges and special rates. As a safeguard to the community, any annual charge must be based on the reason for that charge and its benefit to the user. Once the decision to reclassify is made the public can appeal, make submissions to the minister and the Land and Environment Court.

Richard Crandon commenced at 7.45 pm. He is a retired engineer and resident of Burns Point Ferry Road, and has a pontoon. He questions the legalities of the claim by the Council that the pontoons are illegal. He has good knowledge of the LG Act. He referred to new provisions commencing in 1993, allowing the change to open space classification and land dedication. The Act requires land to be classified and Community land must have a plan of management. He asked whether there was a plan of management for the land. He was advised by Council staff that there was, and it was available there for perusal after the public hearing or on Council's web site. He was advised that special provisions applied but only to Ballina Quays and only for pontoons. Where land is Operational land, Council has full control. He believes there should be a proper plan of management for the waterways to regulate and detail works on the land, such as maintenance. The plan of management is essential in achieving this. If these matters are not addressed in the plan of management then Council has been negligent. Does the reclassification remove Council's requirements? Is this an easy way out for the Council in the absence of a plan of management specific to the canals? There are maintenance issues and liabilities with the canals, and he sees the reclassification as a way for Council to sell the land and remove its maintenance obligations and discharge its responsibilities. He wants to see Council's legal advice.

At this point, there being no further registered speakers, Mike asked if there were any more interested in speaking. Specifically, he asked if any present were representative of the land owners adjoining Lake Banyanda. Of the group, there were only two, and they chose not to speak to the hearing.

Pam Maxwell addressed the hearing at 7.55 pm. She has been resident of Ballina Quays for 22 years and has seen many documents and many issues over this time, particularly regarding maintenance. She referred to legal advice in 1993 obtained by the Council in relation to maintenance. She advised this was referenced in her submission, which she chose to formally table at the hearing. Her interpretation of the advice is that the land is classified as Community land and could stay that way. The advice indicates that the Council is responsible for maintenance.

Ken Thurston addressed the hearing at 7.57 pm. He has been a resident of Ballina Quays for 13 years and is very concerned in relation to proposed maintenance charges. He is reassured by the advice that the maintenance program will not be interrupted by the reclassification proposal. He has read the [August 2008] report to the Council and notes reference to charges in other council areas. He questions the legality if the reclassification goes through. What might happen to stop people from using the canal? Can the Council restrict access to the canal through the application of the Operational classification if there are liability issues identified?

Joe Fisher addressed the hearing at 8.00 pm. He is a resident of Ballina Quays and is a boat owner. There were a lot of boat owners present. He likes being able to use his pontoon and the convenience it provides as a boating enthusiast. He is of the view that the Council does not like boat owners – the Ballina bar is treacherous, the quays are too shallow, the Ballina marina was allowed to be taken away. He feels wronged as a boat owner. He feels that they are not valued enough given they pay higher rates.

Some general and procedural questions were asked by unidentified attendees including: Can the legal advice obtained by the Council be made available to the public? Steve Barnier advised that this would be up to the Councillors and the writer of the advice. In response to a question asked about the legality of the whole process, it was advised that it would be the Councillors making the final decision in this matter.

Noel Warr addressed the hearing at 8.05 pm. He advised that he had approached some Councillors and that they knew nothing of what he was talking about. He believes that the Councillors do not have the knowledge to know what they are doing and that they are not qualified to make this decision. There is a lot of work and reading behind this matter. Will the Councillors take note of this? This is far and above a matter for decision at a Council meeting.

Deanna Savage addressed the hearing at 8.10 pm. She has parents who built on Ballina Quays. She asked if there would be a workshop for the Councillors. Steve advised in response that this would be a matter for the General Manager to decide, but that it was probably likely. If a workshop is scheduled, it is up to the Councillors to participate – they are not obliged to.

Discussion and Recommendation

A number of submissions questioned Council's legal advice and the premise that the current situation of privately owned structures on Community land is unlawful. It was also suggested that under the current Community land designation, Council could issue leases to the owners of the structures if it chose to. This would allow the waterways to stay as Community land and therefore remain as an area open to the public (boats, swimmers, fisherpersons, etc) as well as a drainage reserve. It would give adjacent land owners comfort that Council is not going to divulge itself of responsibilities (particularly maintenance) in relation to the waterways because they would remain Community land.

Other submissions clearly object to leases or licenses in any form as they see them inevitably linked to charges and fees that will probably be recurrent. They also see the concept of changing these waterways to Operational as linked to the cost of maintenance of the waterways. Any extra charge for waterway maintenance is strongly opposed.

Some who presented to the hearing believe the history of development approvals can be viewed as evidence that the existing structures are not illegal and nothing needs to change. Previous legal advice from 1993 appears to differ from the legal advice more recently obtained, but not yet released to the public.

Some submissions expressed concern that Council has not been fully briefed to make a decision on this important matter. The comment is that it should be taken to Councillors as a workshop item so that it can be fully discussed. The legal advice, which is the reason that Council is doing this, should be made available to the public in the interests of transparency.

As the independent chairperson at the hearing, I was aware of the strong views and feelings on this issue on the night. The number of submissions and high attendance at the public hearing demonstrate genuine concern

among residents about what Council is trying to achieve. I also believe there is a lot of misunderstanding and confusion about what is being proposed and what will flow from any change, if it occurs.

In my opinion the recent decision by Council to tender for maintenance dredging in the waterways (albeit allegedly overdue from the five year cycle expected by residents) is a clear statement that the proposed change of the waterways from Community to Operational is not about Council not wanting to undertake maintenance. In my opinion it is also not about charging for maintenance as this could be done by Council regardless of the land being Community or Operational land under the Local Government Act 1993.

In my opinion changing the land to Operational will not facilitate Council collecting fees as a lucrative source of revenue. There are about 145 structures at Ballina Quays and less than 10 at Lake Banyanda. (There are less than 10 on the Endeavour Close waterway as well.) This is a relatively small base from which to collect licence fees, and the cost of collecting those fees would be considerable. There has been no decision taken by Council on the issue of fees and charges should the waterways become Operational land. If the waterways become Operational and structures are licensed, it is inevitable that fees will be considered at some stage. Council, however, has the choice to set these fees at a level it considers appropriate, and that debate is yet to occur. The potential for licence fees is not a reason in itself to avoid reclassifying the waterways.

Council has issued many approvals under the Environmental Planning and Assessment Act 1979 for structures to be erected on and in the waterways at Ballina Quays and Lake Banyanda on Council land. Council knew that the waterways were Community land when these approvals were issued. In the case of Ballina Quays these structures are mentioned in the Principal Generic Plan of Management for Community Land. If Council's current legal advice is correct and these approvals should not have been issued then Council should take action to "regularise" or "make good" its past actions so as to not leave residents exposed to the assumption that their lawfully issued consents are regarded in any way as an unlawful occupation of public land. Since Council is now fully aware of this matter, it should not issue any more consents until it has been sorted out.

The crux of the matter is the accuracy of the legal advice that Council has obtained. This indicates that to make good its past consents and put itself in a position where owners can lodge applications for new or replacement structures, Council should reclassify the waterways to Operational and then issue a licence or lease for the exclusive use of a part of that waterway to those that want to have jetties, pontoons or boat ramps located on or over Council (public) land. The lease or licence creates the relationship between the applicant and the public land (the waterway), and the development approval documents the size and nature of the structure, who has responsibility for its maintenance, etc. In my opinion this advice is partly at odds with legal advice received in 1993 and tabled at a Council meeting (at that time) that indicated the waterway should be classified as Community land (paragraph 17 of the advice). This advice was issued in 1993 so it may be superseded by amendments to the legislation. However, it is currently the only legal advice available to the residents. In fairness to the concerned residents, and to ensure Council is taking the correct action, I am of the view that Council should seek a Barrister's opinion on this matter before it makes its decision as to whether the waterways in question should be changed from Community to Operational in order that leases or licences can be issued for structures approved in the past and can be issued for structures if approved in the future. Council should ensure that the Barrister has relevant experience in the Local Government Act 1993. This advice should be made available to the public so that residents and others can see why Council is taking this action.

My recommendation on Lot 63 DP 263861 and Lot 132 DP 775228, Ballina Quays Canals is:

- 1 Council should confirm (or otherwise) its current legal advice on the key issue of the legality of permitting privately owned structures such as pontoons and boat ramps to be located on Community land (being public land owned by Council). This should be done through a Barrister's opinion and that opinion should be made available to the public so that all Ballina Shire residents can fully understand Council's position.**
- 2 If the Barrister's opinion confirms its current legal advice, then Council should continue to reclassify Lot 63 DP 263861 and Lot 132 DP 775228 as Operational land under the Local Government Act 1993.**

Council should, after this has been finalised, consider its leasing or licensing arrangements for all privately owned structures over Lot 63 DP 263861 and Lot 132 DP 775228.

- 3 If the Barrister's opinion does not confirm its current legal advice and Council can allow privately owned structures such as pontoons and boat ramps to be located on Community land without being in contravention of the Local Government Act 1993, then it should consider updating its Plan of Management to more comprehensively address this matter in relation to structure maintenance and responsibility and public liability. Council should also consider its leasing or licensing arrangements for privately owned structures over Lot 63 DP 263861 and Lot 132 DP 775228 pursuant to the Local Government Act 1993.

Lot 50 DP 259593, Banyanda Lake, Ballina

The group was asked if there was anyone present who was a resident of the Banyanda Lake Estate. Two people indicated they were. They chose not to present to the public hearing.

Discussion and Recommendation

Banyanda Lake is in the same situation as the Ballina Quays Canals, except it is not mentioned in the Principal Generic Plan of Management for Community Land and it has fewer pontoons and boat ramps.

My recommendation on this land is therefore the same as for Ballina Quays Canals. That is:

- 1 Council should confirm (or otherwise) its current legal advice on the key issue of the legality of permitting privately owned structures such as pontoons and boat ramps to be located on Community land (being public land owned by Council). This should be done through a Barrister's opinion and that opinion should be made available to the public so that it can fully understand Council's position.
- 2 If the Barrister's opinion confirms its current legal advice, then Council should continue to reclassify Lot 50 DP 259593 as Operational land under the Local Government Act 1993. Council should, after this has been finalised, consider its leasing or licensing arrangements for privately owned structures over Lot 50 DP 259593.
- 3 If the Barrister's opinion does not confirm its current legal advice and Council can legally allow privately owned structures such as pontoons and boat ramps to be located on Community land without being in contravention of the Local Government Act 1993, then it should consider updating its Plan of Management to include reference to Banyanda Lake as well as to more comprehensively address this matter in relation to structure maintenance and responsibility and public liability. Council should also consider its leasing or licensing arrangements for privately owned structures over Lot 50 DP 259593 pursuant to the Local Government Act 1993.

Lot 5 DP 843369, Old Bagotville Road, Wardell

Three persons in attendance, four Council staff, Mike Svikis is the presiding officer.

Introduction by Steve Barnier, including a welcome to country. He outlined the requirements for a public hearing under the Local Government Act 1993. Steve advised that this matter would most likely go to Council in February 2014, and Council would then consider how this matter should proceed.

He indicated that participants would be advised by letter when the Independent Chairperson's report became available so that they could download it from the web.

Mike Svikis advised how he would manage the hearing with those registered being given first opportunity before opening the floor to others in attendance. Mike outlined his approach to the hearing, advising that he would be primarily listening to the issues raised and then reporting on those issues to Council. He would ask questions if required to clarify any issues. He indicated that up to one hour had been allocated, so there was plenty of time for all there to present their views.

Cullimurra Woia (Acting CEO Jali LALC) commenced at 6.10 pm. Ms Woia tabled information related to the National Reserve System (NRS) and advised that the NRS was a network of protected areas which included the Ngunya Jargoan Indigenous Protected Area (NJIPA). She advised that the NJIPA adjoined Lot 5 (Appendix A).

Ms Woia advised that the whole Shire should be proud of the NJIPA and the NRS. She indicated that so far this year five school groups, each containing 50 or more people, had visited the NJIPA. These groups had received information about the cultural history and ecology of the area. Nothing like the NJIPA exists elsewhere in Ballina Shire. She advised that the reclassification would take away an important buffer area between the cane farms and quarries and the NJIPA. This, in turn, would diminish the value of the Indigenous Protected Area (IPA).

The IPA attracts significant grant funds for employment and training. In her opinion, the IPA people could partner with Council to preserve the land.

She indicated that the IPA was an important wildlife corridor for the Long-nosed Potoroo and this corridor included Lot 5. It is important for the whole Shire that this valuable ecosystem be protected. Lot 5 has permanent water that the IPA does not have nearby. It is very important.

She indicated that her (and Jali LALC's) preference was for the whole of Lot 5 to be left as Community land so that it would be preserved for the benefit of the whole Shire. Development of the land would impact on the IPA.

Mike Svikis asked Ms Woia if Jali would want to take over ownership of the land if the opportunity arose? She answered that they would, but management and protection of the land is more important than owning it. She indicated that the concern is that the land will be taken away and developed. She believes that little things can impact a great deal. If reclassification resulted in development, this would have a great impact on wildlife. She advised that Jali could do weed and pest control on the land if it remained Community land. Also consider that Lot 5 will serve as a buffer to the IPA from the proposed Pacific Highway alignment.

David Milledge commenced at 6.30 pm. He advised that he has been a wildlife ecologist for 45 years. Currently works part-time for the Nature Conservation Council and as a consultant.

He tabled a paper on the distribution of Long-nosed Potoroo habitat on the far north coast of New South Wales, which he has co-written for publishing in the Australian Zoologist (Appendix B).

He indicated that he has two primary interests related to Lot 5. Firstly, it is integral to maintenance of biodiversity within the NJIPA. He considered that the IPA land is more significant than a National Park because it has national significance, not just state. He considers that Lot 5 intrudes into the IPA and is essentially part of it.

The second interest relates to the Long-nosed Potoroo, which is listed as vulnerable under national and state legislation. He advised that the IPA probably contains the last viable population of the Long-nosed Potoroo on the North Coast of New South Wales.

In his role with the National Conservation Council he conducts monitoring surveys over five different IPAs. In respect to Lot 5 he has not conducted any formal biodiversity surveys, but he has conducted them all around it. He has recorded various endangered species in the NJIPA as per his written submission.

He considers that Lot 5 has very high biodiversity value in its context with the NJIPA. It has a high movement corridor value. He had issues with Council's assessment report as it made no reference to its biodiversity value. The report should have also referenced its location in terms of proximity to the IPA.

He has specific issues regarding how Council staff had interpreted part 3 of the DoPI practice note on planning proposals. He claims that staff had misconstrued this technical issue regarding whether or not the reclassification would have any environmental impact.

Mike Svikis asked whether David Milledge believed there was any direct impact on Lot 5 from proposed reclassification as such? Mr Milledge answered yes, because reclassifying all of Lot 5 implies it is all suitable for some sort of development and that Council can do what it wants with it. Maybe RMS will put a depot on it for their road project.

Mr Milledge considers that there may not be any direct impact from the reclassification but that this is the thin edge of the wedge. Council should have undertaken a threatened species assessment under Part 5A.

He considers that Council would be in a stronger position if the land remained Community. Council could then negotiate with the RMS to use the land as compensatory habitat.

He advised that the land also had connectivity values to land on the other side of Bagotville Road.

In summary, Mr Milledge strongly advocated that the land stay Community. If this occurred then Council could more strongly advocate the land's biodiversity values and obtain a stronger financial return.

Mike Svikis asked David Milledge whether he would like the land managed by the same people that manage the IPA? Mr Milledge answered yes – the land is integral to the IPA as it is part of the paper bark wetlands. Approximately four-fifths of Lot 5 should be managed as part of the IPA.

Mike Svikis asked Mr Milledge that if it was true that under the LG Act land could only be transferred to a Crown authority if it stayed Community, did he see this as problem if it could not be transferred to IPA? Not if managed appropriately by Council.

Mike Svikis asked Mr Milledge if he was aware that the land was designated E2 in the draft LEP before that part of the land became a deferred matter? Yes, he was aware of that.

Mike Svikis asked Mr Milledge if he thought that the draft zoning, if implemented, would provide protection for the land? Mr Milledge did not think so due to the ISEPP provisions.

Ms Woia stated to the hearing that her aim was not to gain the land for the IPA but to ensure that the land remains Community for the benefit of the community. She indicated that if it stayed Community then Jali could do weed and feral pest control without cost to Council.

Marcus Ferguson commenced at 6.45 pm. He indicated that he was the Cultural Sites Officer with Jali LALC and Co-ordinator for the IPA. He advised that he has dealt with the Pacific Highway proposal since 2002. He has a number of issues with the highway location due to impacts on permanent water sources and the IPA. He advised that on the Jali land the water dries up, but not on the Council land (Lot 5). Jali wants to look after Lot 5 and the biodiversity of this area. The highway will destroy scar trees and stone arrangements. He cannot be sure if there are or are not any Aboriginal cultural heritage sites on Lot 5. There are none registered that he is aware of, but others are nearby.

Discussion and Recommendation

Council has stated its intention in changing the classification of Lot 5 is that it is no longer regarded as suitable for the use for which it was purchased, ie a quarry or landfill site (or both). Council is also aware that part of Lot 5 may be required by RMS for the Pacific Highway bypass and they would consider it to be an advantage to have the lot Operational rather than Community. Since Council made its decision to commence the process of reclassification, RMS has issued a property acquisition sketch (dated 28/10/13), which shows an area at the western edge of Lot 5 that is marked for possible acquisition to be used for the highway (Appendix C). This sketch was available for discussion at the public hearing.

I agree that the biodiversity values of a large part of Lot 5 have not been emphasised in the supporting material to the planning proposal, and the existence of the IPA on land immediately surrounding it is also not mentioned. I do not consider that the planning proposal should have been the subject of a Threatened Species assessment or referred to the Commonwealth Government under the EPBC Act 1999. If the land goes to Operational, Council may well choose to dispose of all or part of it, including some of it to RMS. However, it is the subsequent actions by RMS or other owners that would be subject to detailed environmental assessment, not the act of changing the land classification under the Local Government Act 1993. Facilitating the sale of a piece of land to RMS could result in the balance of Lot 5 ending up with the Jali LALC and incorporated into the IPA, if Council was to choose to do this. The choice to transfer land to a non-government organisation such as Jali LALC is only available to Council if the land is Operational.

However, no formal discussion with Jali LALC has occurred and its clear position on this matter is that it opposes the reclassification to Operational under the LG Act. It supports Council retaining the land and working with Jali LALC to manage it as Community land.

Land classified as Community can still be transferred to a Crown authority whether it is Community or Operational. Although the RMS has only expressed an interest in part of Lot 5 for the highway realignment, it may be interested in the balance as an environmental offset area.

In relation to the future use of Lot 5 if it were to become Operational land, this would be largely influenced by the zones that apply to it under Council's LEP. In this case Ballina LEP 2012 zones Lot 5 partly RU2 Rural Landscape and partly "deferred matter". The "deferred matter" was going to be zoned entirely E2 Environment Protection, but this zone was deferred by the Minister throughout Ballina LEP 2012, leaving Ballina LEP 1987 as the substantive LEP over these deferred areas. Under Ballina LEP 1987 the deferred area on Lot 5 is zoned part 1(b) Rural (Secondary Agricultural Land) and part 7(l) Environmental Protection (Habitat). The two LEPs are shown in Figures 3a and 3b.

From this it is clear that the environmentally significant land on Lot 5 is not currently adequately protected by Councils LEPs. The area covered by 7(l) under LEP 1987 is considerably smaller than the area proposed as E2. In changing the classification of Lot 5 from Community to Operational, the subsequent sale of the land could lead a purchaser to believe that land zoned Rural under LEP 1987 could be cleared (for say, agriculture) without consideration of its environmental values. Parts of this land have high biodiversity value and are likely the habitat of Threatened Species such as the Long-nosed Potoroo.

The other concern with Lot 5 is the lack of information on its Aboriginal cultural heritage significance. AHIMS does not record any sites occurring on Lot 5, however Marcus Ferguson is aware of several in the general locality, so there is a possibility that they occur on Lot 5 as well. Had the E2 zone been applied by LEP 2012 as Council intended, it is likely that any sites would be covered by that zone. Partly because it is extensive and partly because the area in RU2 at the western edge of Lot 5 is heavily disturbed by past clearing and quarrying activity.

My recommendation on Lot 5 DP 843369, Old Bagotville Road, Wardell is:

- 1 Council should retain as Community land all that part of Lot 5 that is currently designated as "deferred matter" under LEP 2012. The balance of Lot 5 that is zoned RU2 under LEP 2012 should be reclassified as Operational land. When the environment protection zones have been finalised in LEP 2012 and Lot 5 is zoned according to its environmental characteristics; and when Council has considered whether it wants to manage Lot 5 in the long-term or pass it on to a land management group (such as the managers of the adjacent IPA), then the matter of its classification can be revisited as a way of facilitating its transfer (either all of it or part of it) to an appropriate land manager, if this is Council's preferred position.**
- 2 If Council considers splitting Lot 5 into two classifications is not practical then all of Lot 5 should be retained as Community land until such time as the environment protection zones have been finalised in LEP 2012 and Lot 5 is zoned according to its environmental characteristics. This should ensure that the ecological values and Aboriginal cultural heritage values (potentially) of Lot 5 are not**



compromised by a future owner. When Council has considered whether it wants to manage Lot 5 in the long-term or pass it on to a land management group (such as the managers of the adjacent IPA), then the matter of its classification can be revisited as a way of facilitating its transfer (either all of it or part of it) to an appropriate land manager, if this is Council's preferred position.

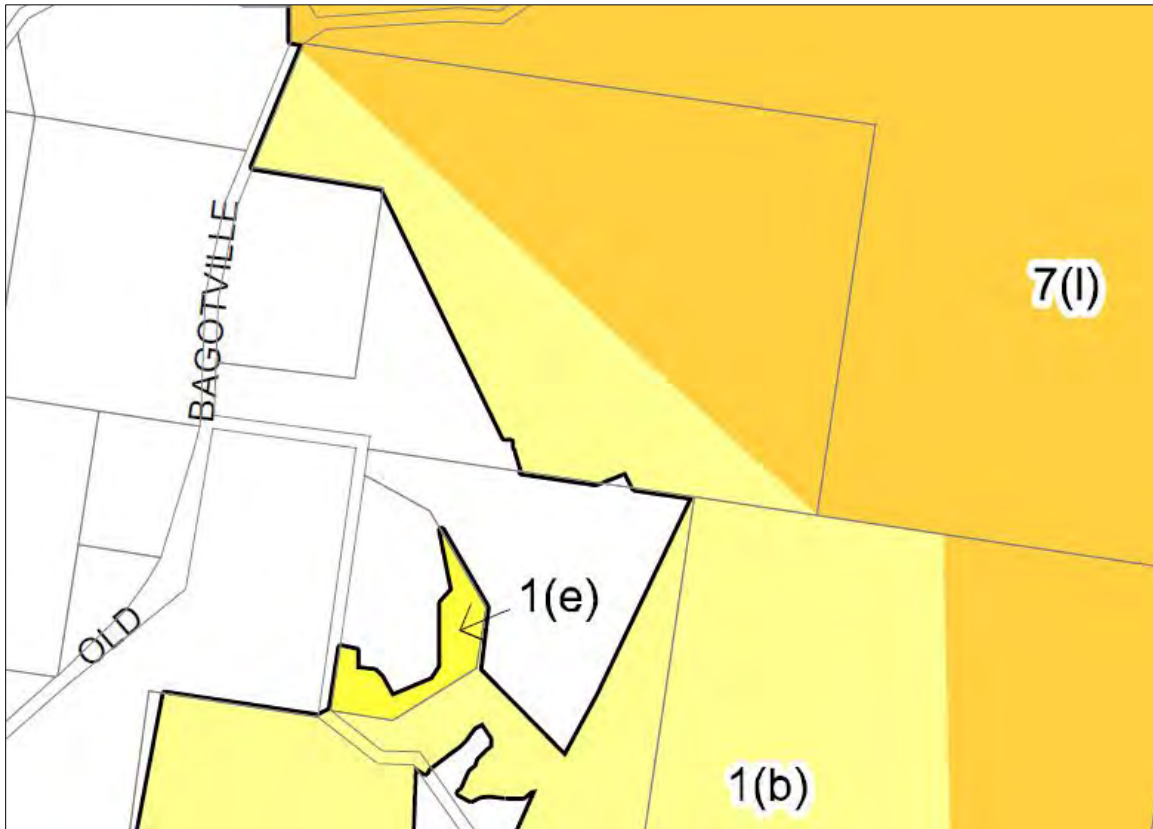


Figure 3a: Lot 5 as zoned under LEP 1987

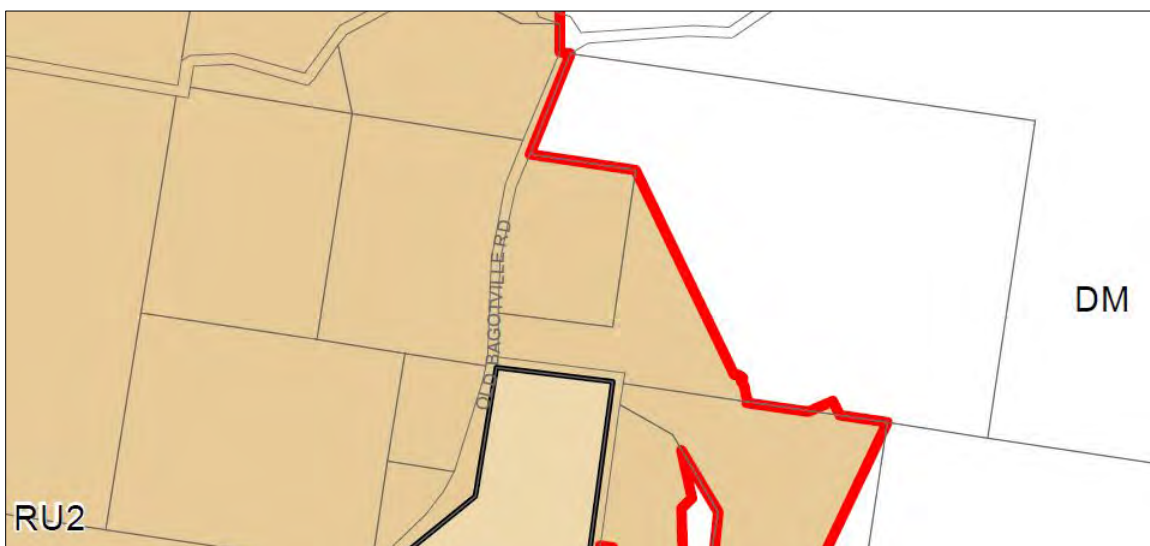


Figure 3b: Lot 5 as zoned under LEP 2012

Appendices

Appendix A: Jali Indigenous Protected Area Information

Appendix B: Ecological Paper (unpublished) on Long-nosed Potoroo by Andren et al

Appendix C: Property Acquisition Sketch by RMS for proposed Highway Alignment



[Menu](#)**Australian Government****Department of the Environment**

National Reserve System



Three Mile Waterhole, Henbury Station NT

The National Reserve System is Australia's network of protected areas, conserving examples of our natural landscapes and native plants and animals for future generations. Based on a scientific framework, it is the nation's natural safety net against our biggest environmental challenges.

The reserve system includes more than 10,000 protected areas covering 16.52 per cent of the country - over 12.7 million hectares. It is made up of Commonwealth, state and territory reserves, Indigenous lands and protected areas run by non-profit conservation organisations, through to ecosystems protected by farmers on their private working properties.

About the National Reserve System



The National Reserve System is underpinned by a scientific framework.

[About the NRS](#) | [Science, maps and data](#)

Funding and getting involved



The National Reserve System is one of the world's great conservation partnerships. Under Caring for our Country, the Australian Government committed \$180 million to build the National Reserve System over the five years to 2013.

[Funding](#) | [Getting involved](#) | [Our partners](#)

1.2 The goals of the Indigenous Protected Areas element of the Caring for our Country initiative are to:

- Support Indigenous land owners to develop, declare and manage IPAs on their lands as part of Australia's [National Reserve System](#).
- Support Indigenous interests to develop cooperative management arrangements with Government agencies managing protected areas.
- Support the integration of Indigenous ecological and cultural knowledge with contemporary protected area management practices.



Ngunya Jargoon



2. IUCN CATEGORY

The Nguna Jargoon IPA lands are assessed by the JALI Local Aboriginal Land Council Board to meet the International Union for Conservation of Nature (IUCN) category VI.

Category VI protected areas conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Primary objective

To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.

Other objectives

- To promote sustainable use of natural resources, considering ecological, economic and social dimensions;
- To promote social and economic benefits to local communities where relevant;
- To facilitate inter-generational security for local communities' livelihoods – therefore ensuring that such livelihoods are sustainable;
- To integrate other cultural approaches, belief systems and world-views within a range of social and economic approaches to nature conservation;
- To contribute to developing and/or maintaining a more balanced relationship between humans and the rest of nature;
- To contribute to sustainable development at national, regional and local level (in the last case mainly to local communities and/or indigenous peoples depending on the protected natural resources);
- To facilitate scientific research and environmental monitoring, mainly related to the conservation and sustainable use of natural resources;
- To collaborate in the delivery of benefits to people, mostly local communities, living in or near to the designated protected area;
- To facilitate recreation and appropriate small-scale tourism.

Statement of principles

Within category six it is envisaged that the Nguna Jargoon IPA will support the development of four key themes. It will be a place:

- Which is healthy and protected. Where cultural and natural values exist as one.
- for education and inter generational learning.

- for work and employment and sustainable business development.
- to visit and enjoy.

2.1 Summary statements of significance

The Ngunya Jargoon IPA are a valuable resource for Jali members to express and develop their connection to land in a region with decreasing amounts of bushland. Many of the plants and animals are of economic and cultural significance. Throughout this plan the land of the IPA is referred to as 'Jali Lands' a title well known to the community or 'Ngunya Jargoon IPA' a name which was created for the IPA.

Within the Ngunya Jargoon IPA an intact archaeological and historic record demonstrates continued use of the lands by Aboriginal people dating back to approximately 3500bp.

The Jali lands are the largest and most significant wildlife corridors in the Lower Richmond Valley and together with the adjoining Blackwall Range and Tuckean Swamp provide a major refuge for biodiversity in an otherwise critically fragmented landscape.

The Ngunya Jargoon IPA contains almost the entire catchment of the near-pristine Bingal Creek, the only remaining example of a near completely vegetated catchment in the Lower Richmond Valley.

The IPA is known habitat of over 38 threatened fauna species, 5 threatened flora species (out of a total of over 400 vascular plant species) and 8 endangered ecological communities.

The Jali Lands are under a number of threats including: weed and feral animal infestation; loss of biodiversity from inappropriate fire regimes; changes to soil and water health from nearby developments; climate change related sea level rise; and illegal use including rubbish dumping and logging.



Map 1. Aerial photo showing the location of Ngunya Jargoon IPA, near Wardell on the Richmond River.



5. WHAT'S IMPORTANT TO US – OUR ASPIRATIONS

Management plan consultations identified four community aspirations for the use of the land.

1. Be a place which is healthy and protected.

The most commonly recurring theme during consultation. Bundjalung people consulted share a common desire to restore the area of Jali Lands declared as an IPA to health and maintain its integrity. The word 'health' is used in the Indigenous sense to include natural and cultural values. There are many well formed ideas (particularly from the Green Team) about what NRM work is required to achieve this goal. Much work has already been accomplished.

2. Be a place for education.

A strong theme was identified in which the IPA area should be a basis for education. That is, the education of children in the ecology of the land and the cultural landscape; and the education of adults who are working on the Jali Lands, or who might come as visitors.

3. Be a place for work and employment.

The Green Team are already working on the IPA area in various capacities, either through their training providers (eg. TAFE) or stakeholders (e.g. Wetland Care). There is a strong desire that this work should continue. There are also emerging ideas for cultural tourism, camping and nature trails/boardwalks.

4. Be a place to visit and enjoy.

The Jali Lands were used frequently in the past as a camping and meeting places and people would like to see it appreciated again in this regard. Some strategies have been put forward to achieve this such as open days and camping infrastructure. The process of IPA consultations has been successful in catalysing people to visit the lands again.

10. APPENDIXES

10.1 Vegetation Map



Map 4. From Hot Spots Fire Plan

The distribution of Long-nosed Potoroo *Potorous tridactylus tridactylus* habitat on the far north coast of New South Wales

Mick Andren¹, David Milledge², David Scotts³ and Jill Smith¹

¹Biodiversity Assessment Unit, North East Branch, New South Wales Office of Environment and Heritage, Coffs Harbour, New South Wales 2450, Australia.

²Landmark Ecological Services, PO Box 100 Suffolk Park, New South Wales 2481.

³Wildlife Matters, 40 Oceanview Crescent, Emerald Beach, New South Wales 2456.

Email: mick.andren@environment.nsw.gov.au

ABSTRACT

The Long-nosed Potoroo *Potorous tridactylus tridactylus* has declined substantially on the far north coast of New South Wales. In this study, the known and potential habitat of the Long-nosed Potoroo on the coastal sandplain in the region is mapped in detail for the first time. A total of 3,613 ha of potential habitat is distributed in 10 areas from 24 ha to 1,423 ha in size. Heathy Scribbly Gum *Eucalyptus signata* woodland was considered to be particularly significant habitat in the region. While there is evidence that eight of the areas mapped once supported potoroos, their presence has only been confirmed in four of them since 2000. Targeted survey at known sites where the Long-nosed Potoroo has not been recently confirmed is urgently required, as well as a thorough reassessment of its conservation status in the region. Ecological research into threats and food preferences, and implementation of targeted conservation management actions is also needed.

Key words: Long-nosed Potoroo, endangered marsupials, mammal conservation, threatened species

Introduction

Potoroids (Marsupialia: Potoroidae) have fared poorly in Australia over the last two centuries. Of the 10 modern species, two are presumed to be extinct and all others have suffered declines, most of them severe (Claridge *et al.* 2007). The Long-nosed Potoroo *Potorous tridactylus* has declined on the Australian mainland (Claridge *et al.* 2007; Johnston 2008; Martin and Temple-Smith 2010; Frankham *et al.* 2012) and there has been a number of local population extinctions (Claridge *et al.* 2007; Martin and Temple-Smith 2010). It is listed as a Threatened species under the Commonwealth *Environment Protection and Biodiversity Conservation Act* 1999 and also under State legislation in New South Wales (NSW), Queensland, Victoria and South Australia. One population at Cobaki Lake on the NSW far north coast is listed as an Endangered Population and declines are considered to be occurring elsewhere in the State (Lunney 1989; Mason 1997).

Frankham *et al.* (2012) recommend that the mainland population of the Long-nosed Potoroo be managed as three separate subspecies, including *Potorous tridactylus tridactylus*, the subspecies assigned to its occurrence in southeast Queensland and northeast NSW. The eastern escarpment of the Great Dividing Range in northeast NSW is the stronghold for this subspecies, with a series of relatively regularly spaced populations from the Barrington Tops region to the Border Ranges (Schlager 1981; NPWS 1994). In contrast, along the coastal margin the distribution is extremely fragmented (Schlager 1981),

with populations separated by wide gaps. Notwithstanding the limited number of targeted surveys that have been conducted in the coastal margins, between the Richmond and Hunter Rivers there are only four locations where potoroos have been reliably observed: Limeburners Creek, Old Bar, Forster and Port Stephens. In Queensland, mainland coastal populations once occurred on the Gold Coast and Sunshine Coast (Amos 1982), and the species is apparently extant on Fraser Island (Martin and Temple-Smith 2010).

The far north coast of NSW (defined here as the coastal plain north of the Richmond River) may once have been a coastal stronghold for the species. A string of localities where the Long-nosed Potoroo was known to occur span the region, from Wardell on the Richmond River to Cobaki Lake near the Queensland border. Early records from far north coast populations came from a road-kill near Lennox Head in 1971, a juvenile animal killed by a domestic cat at Wardell in 1980 and a pouch young found dead at the same Wardell locality in 1981 (Schlager 1981).

During a terrestrial vertebrate survey of coastal Byron Shire in 1985, three Long-nosed Potoroos (adult male and adult female with young at heel) were trapped at one site (Fig. 1a) in what is now Tyagarah Nature Reserve (Milledge *et al.* 1986; Milledge 1991). The species was also recorded in surveys of the vertebrate fauna of the Cudgen Lake (Fig. 1b) and Brunswick Heads areas in 1988 and 1992 (Milledge 1988; Milledge and McKinley 1992). The ongoing presence of the Cudgen

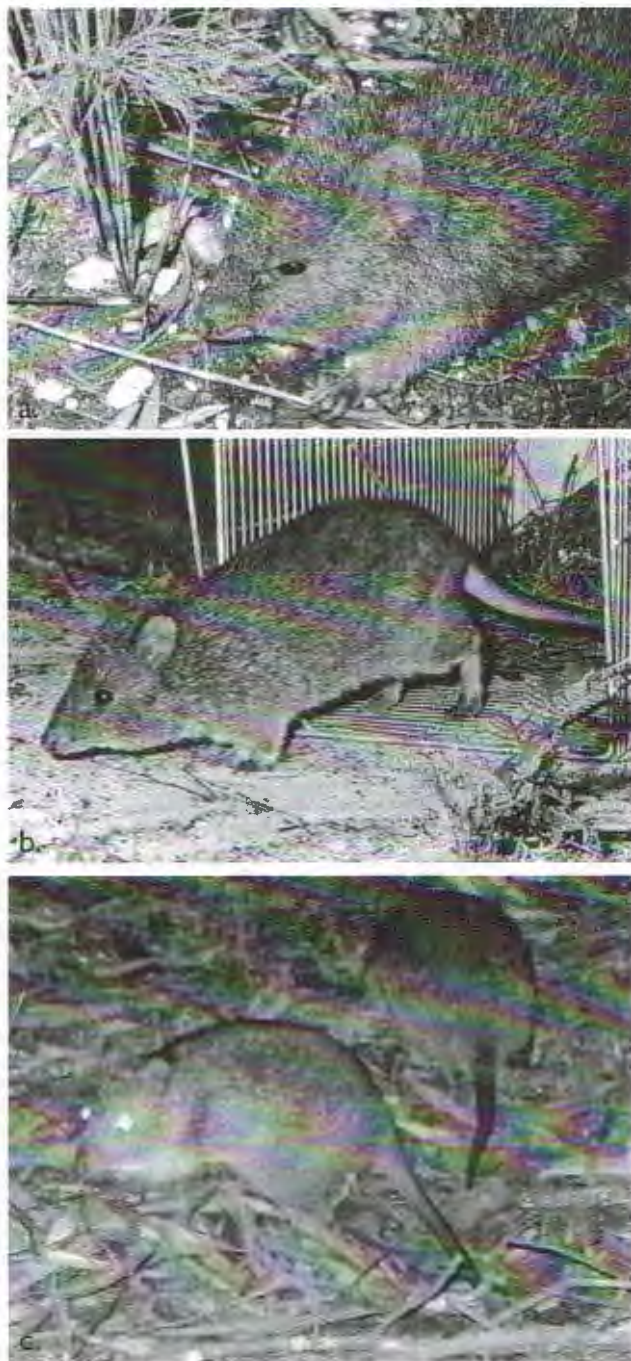


Figure 1. Long-nosed Potoroos trapped at (a) Tyagarah in 1985 and (b) Cudgen Lake in 1988, and (c) camera-trap photo from Wardell in 2009. Photos, (a) and (b) D. Milledge and (c) M. Andren.

Lake population was confirmed in 2004 (Callaghan *et al.* 2004). However, in 2006 the species was not found in a targeted survey of Cudgen Nature Reserve by Goldingay *et al.* (2006). Following a similar trend, the Brunswick Heads population was confirmed in 2000 (Milledge 2000) and again in 2004, but camera trap surveys in 2009 (D. Scotts unpubl. data 2012) and 2011 (N. Graham pers. comm. 2012) failed to detect the species.

The Long-nosed Potoroo population in Tyagarah Nature Reserve was assessed by Mason in 1992, who estimated a minimum population size of 80-90 individuals within the Nature Reserve (Mason 1997). Mason concluded that the small number of individuals in the population does not "...augur well for its indefinite persistence" (Mason 1997). Parker (2005) also surveyed this population at its southern extent in 2004, when four individuals, including two females were trapped within an area of approximately 12 ha. However, a number of recent surveys in Tyagarah Nature Reserve have failed to detect potoroos; cage trapping in 2009 (Goldingay and Lindsay 2009), and camera traps in 2009 (D. Scotts unpubl. data 2012), 2010 (N. Graham pers. comm. 2012) and 2012 (Lake 2012).

Mason (1993) also carried out a survey of the Long-nosed Potoroo at Cobaki Lake near Tweed Heads after the species had been recorded on Crown land in the area (Warren 1992). A substantial amount of survey and radio-tracking has subsequently been conducted on this population as part of the environmental assessment for the Pacific Highway Tugun Bypass (Bali *et al.* 2003). The size of this small and isolated population was estimated to be 55-85 individuals (Bali *et al.* 2003; Lewis and Freestone 2009). Additionally, Parker (2006) described the presence of suitable potoroo habitat and recorded numerous apparent diggings (P. Parker pers. comm. 2011) at Cobaki Lake during a survey to the west of the Tugun Bypass study area, although a substantial amount of this habitat has now been cleared (D. Milledge pers. obs. 2012). Elsewhere, camera-trap surveys on Jali Local Aboriginal Land Council land from 2009 to 2012 (Graham and Morrison 2009; M. Andren unpubl. data 2012) have confirmed that a population remains extant in the Wardell area (Fig. 1c). However, small scale camera-trap surveys at Lennox Head and Billinudgel in 2012 (80 trap-nights at each location) failed to re-locate potoroos in those areas (M. Andren unpubl. data 2009-2012).

It is important to maintain populations of Long-nosed Potoroos for their valuable role in ecosystem functioning. They are considered to be significant dispersers of hypogaeal (underground) fungi species, which in turn are likely to be important for host-plant vigour and survival through their mycorrhizal associations (Malajczuk *et al.* 1987; Claridge *et al.* 1992; Claridge *et al.* 1993; Johnson 1995). Although Long-nosed Potoroos are omnivorous, consuming plant tissue and invertebrates (Bennett and Baxter 1989), the consumption of sporocarps of hypogaeal fungi is a large and extremely important component of their diet (Guiler 1971; Langer 1980; Bennett and Baxter 1989; Seebeck and Rose 1989; Claridge *et al.* 1993; Claridge and Cork 1994; Tory *et al.* 1997; Claridge *et al.* 2007). In Victoria, Claridge *et al.* (1993) recorded 58 different fungi species in the diet, with mycophagy prominent in the cooler, wetter months and less important at other times of the year (Claridge *et al.* 1993).

Potoroos locate the sporocarps by smell and use the claws on their forepaws to unearth them, resulting in their characteristic diggings (Fig. 2). Soil quality may be improved through the turnover and aeration from these diggings (Frankham *et al.* 2011). Localised loss of potoroos may therefore be detrimental to ecosystem functioning through the loss of their fungi dispersal role and decreased soil turnover.



Figure 2. Mark Graham examining Long-nosed Potoroo diggings in a dried-out swale in wet heathland in the Ngunya Jagoon Indigenous Protected Area, Wardell in 2013. Photo, D. Milledge.

Knowledge of habitat and its distribution is fundamental to an assessment of the conservation status and management of a species. On the far north coast, the Long-nosed Potoroo generally occurs in heathy woodland or shrubland (Mason 1997). The species rarely moves far from dense vegetation (Kitchener 1973; Bennett 1993; Long 2001) and uses well-defined runways through thick undergrowth and well-hidden "squats" for resting (Kitchener 1973; Seebeck *et al.* 1989; Long 2001). However, it also prefers small patches of open habitat for foraging (Bennett 1993). Structurally diverse microhabitats are therefore characteristic of individual potoroo home ranges (Bennett 1993; Claridge and Barry 2000; Norton *et al.* 2010).

Although there is some knowledge of the habitat occupied by the Long-nosed Potoroo on the far north coast, there are relatively few reliable and spatially accurate records in the region. Modelling the habitat distribution using statistical methods was therefore not considered likely to result in a reliable prediction. Instead, we combined knowledge of the habitat requirements with detailed geological and vegetation mapping (available for many parts of the far north coast), as well as local knowledge of areas occupied by the species to produce a detailed map of potential habitat.

Methods

Study area

The study area comprises part of the coastal plain from Tweed Heads on the NSW / Queensland State border south to the Richmond River and is 87,265 ha in size (Fig. 3).

The natural habitats of the study area have become highly fragmented due to vegetation clearing, initially for agriculture and currently for urban development and associated infrastructure. Approximately 72.5% of the original vegetation has been cleared and only 23,992 ha remain. The study area includes approximately 95 km of coastline of which about 57 km (60%) is heavily urbanised. This includes a nearly continuous urban strip

for the 33 km from Tweed Heads to Pottsville. About 26 km (27%) of the coastline is contained in conservation reserves managed by the NSW National Parks and Wildlife Service (NPWS). The remaining 12 km (13%) is mostly comprised of small rural holdings.

Habitat mapping

Long-nosed Potoroo observations and habitat descriptions were collated, including those from Bali *et al.* (2003), Callaghan *et al.* (2004), Goldingay and Lindsay (2009), Goldingay *et al.* (2006), Lewis and Freestone (2009), Mason (1993, 1997), Milledge (1988, 1991, 2000), Milledge and McKinley (1992), Milledge *et al.* (1986, 1995) and Parker (1993, 2005, 2006). The NSW Office of Environment and Heritage's *Atlas of NSW Wildlife* contained 37 records that were considered to be reliable and accurately located, including records from most of the above studies.

The detailed coastal Quaternary geology mapping of Troedson *et al.* (2004) was an important resource for mapping Long-nosed Potoroo habitat. The Pleistocene coastal barrier sand deposits comprise wind-blown and marine-deposited sands that were created during periods of high sea level (before 10,000 years ago). Twenty-seven of the 37 *Atlas of NSW Wildlife* records (73%) are located directly on Pleistocene beach ridges and backbarrier flats mapped by Troedson *et al.* (2004), highlighting the significance of this geology for the potoroo in the region.

Holocene barrier sands have been deposited in the active depositional coastal zone and have accumulated over the last 10,000 years following post-glacial marine transgression (Troedson *et al.* 2004) and appear to be of lesser importance as Long-nosed Potoroo habitat. While seven of the potoroo records were located on Holocene deposits, these were mostly closely associated with broader Pleistocene deposits (e.g. Holocene swamp deposits within the Pleistocene dune complex). There were no records of the species from the Holocene sand dunes. Three records were located on bedrock, but again these were within close proximity to the Pleistocene sandplain.

Vegetation communities found on the Pleistocene sands on drier sites include Wallum *Banksia Banksia aemula* dry heathlands, Scribbly Gum *Eucalyptus signata* heathy woodlands, Coastal Blackbutt *Eucalyptus pilularis* heathy woodlands and Coast Cypress Pine *Callitris columellaris* open forests. Heath-leaved *Banksia Banksia ericifolia* wet heathlands and shrublands, Broadleaved Paperbark *Melaleuca quinquenervia* wet shrublands and sedgelands are found on wetter sites (Sheringham *et al.* 2008).

Scribbly Gum woodland with a heathy understorey appears to be a particularly significant habitat for the Long-nosed Potoroo in the region. It has been identified at Cobaki Lake (Bali *et al.* 2003), Wardell (M. Andren unpubl. data 2012) and other areas (D. Milledge pers. obs. 2012, D. Scotts pers. obs. 2009) as a key habitat (Fig. 4). Scribbly Gum growing on the sandplain has a distinctive signature in the aerial photography available (ADS40 50 cm digital aerial photography on the Tweed Heads, Lismore and Ballina 1:100,000 mapsheets) and was rapidly digitally mapped using ArcView GIS software.



Figure 4. Long-nosed Potoroo habitat in Scribbly Gum-dominated heathy forest and woodland in the Ngunya Jargoon Indigenous Protected Area, Wardell where many potoroo diggings were observed in 2013. Photo, D. Milledge.

Two existing maps of potoroo habitat were available, one for Tyagarah Nature Reserve (Mason 1997) and one for Cobaki Lake (Bali *et al.* 2003). In Tyagarah Nature Reserve the potoroos were considered to favour dry and moist shrubland in the early to middle seral stages with emergent Wallum Banksia and a mosaic of dense understorey and open areas (Mason 1997). Mason estimated a density of 0.23 – 0.26 animals/ha, or 80-90 individuals, within 340 ha of the Nature Reserve. Prime habitat at Cobaki Lake was found to be Scribbly Gum mallee heathland and Tree Broom-heath *Monotoca elliptica* heathland (Bali *et al.* 2003). The density of potoroos was estimated at 1.1 animals/ha in the former habitat and 0.9 in the latter (Bali *et al.* 2003).

In addition, a number of general vegetation maps were also used; recent reliable and detailed mapping for two local government areas (Tweed and Byron), a detailed map of Tyagarah Nature Reserve, as well as coarse regional mapping of less reliability covering the entire area (NPWS 1999).

The existing potoroo habitat mapping, Scribbly Gum woodland mapping and the general geology and vegetation coverages were combined to produce a preliminary map of likely Long-nosed Potoroo habitat across the study area. We qualitatively categorised habitat into four quality classes; Class 1 (High Quality potoroo habitat), Class 2 (Intermediate Quality), Class 3 (Low Quality) and Class 4 (Very Low Quality). Table 1 shows how the geomorphology and vegetation data were combined to assign areas to classes for the preliminary habitat map.

We then thoroughly reviewed the preliminary map of likely Long-nosed Potoroo habitat and adjusted boundaries and classes according to local knowledge of potoroo distribution, disturbance, habitat quality and accuracy of the vegetation mapping. In some places where the underlying data was inaccurate, the adjustments occasionally resulted in significant changes to the preliminary map. Finally, to account for the use by Long-nosed Poroos of areas adjacent to their primary habitat, native vegetation within 100 m of mapped Class 1 habitat was assigned to Class 2, and within 50 m of Class 2 assigned to Class 3.

Results

The far north coast map of potential Long-nosed Potoroo habitat is shown in Fig. 5 and detail of the particularly significant Tyagarah/Brunswick Heads area in Fig. 6. A total of 3,613 ha of potential habitat was mapped. This represents 15% of the remaining vegetation in the study area. Most (97%) is below 10 m in elevation. Only 969 ha of high quality habitat was mapped (4% of the remaining vegetation; 99% below 10 m elevation).

Over 99% of the 392 ha of Scribbly Gum woodland on the Pleistocene sands was considered to be potential Long-nosed Potoroo habitat. Only a few small, isolated and highly disturbed patches were excluded. Scribbly Gum woodland occurred at many of the historical Long-nosed Potoroo locations and few large patches were found to occur outside these locations. However, not all of the Scribbly Gum woodland was considered to be of the highest quality habitat, such as some examples in wetter areas that were downgraded to lower habitat classes. Additionally, some potoroo occurrences were not associated with Scribbly Gum woodland, such as many of the localities in Tyagarah Nature Reserve.

The area, tenure, status and historical summary of Long-nosed Potoroo habitat mapped in the 10 areas identified is listed in Table 2. Tyagarah/Brunswick Heads and Wardell together contain 70% of all mapped habitat and 80% of the high quality habitat.

Two of the Long-nosed Potoroo surveys undertaken on the far north coast are illustrated in Figure 7.

Discussion

Mapping the habitat distribution of vertebrate species is notoriously problematic due to the detailed complexity of natural systems and the coarseness of the information used to interpret them. Consequently, animals may be absent from some of the supposedly optimal mapped habitat, but present in areas not mapped at all. However, a reliable distribution is an invaluable tool for assessing and implementing conservation strategies for a species. Habitat mapping is therefore a worthwhile, if imprecise undertaking.

Based on our extensive experience with the species on the far north coast, we are confident that the Long-nosed Potoroo map of potential habitat presented here is relatively accurate and that significant tracts of habitat have not been omitted. Of course, inaccuracies remain such as those arising from the deficiencies and inconsistencies in some of the existing vegetation mapping. While subjective interpretations were often used to try and correct such problems, the results should not be adopted without further critical evaluation and, ideally, field validation.

Ten areas of Long-nosed Potoroo habitat were identified, eight of which have some historical evidence of occupation. The other two, Arakwal and Hastings Point, both appear to contain potential habitat but there is no evidence of occupation by potoroos and the areas are very small, at 45 ha and 46 ha respectively. Of the eight

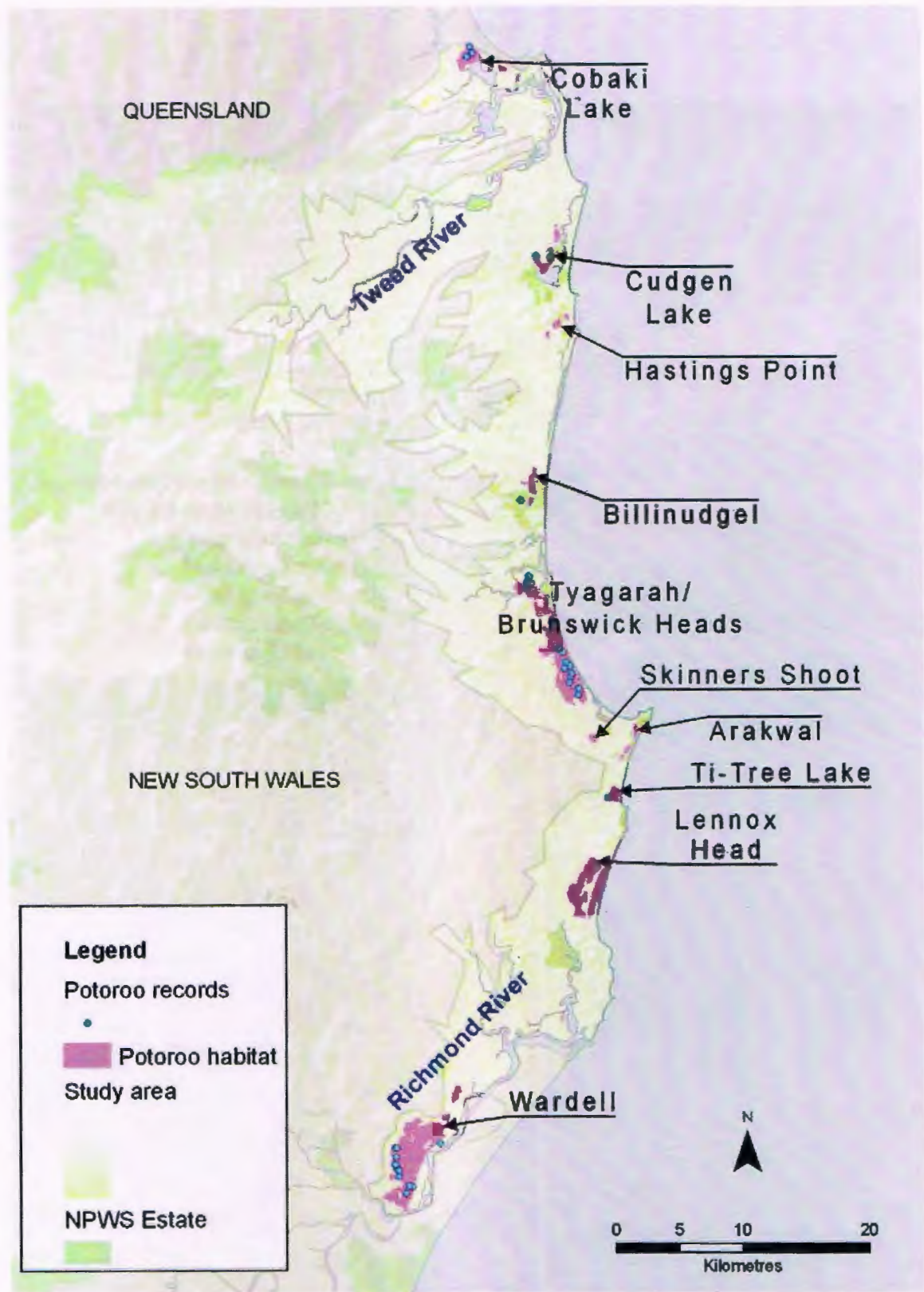


Figure 5. The 10 areas of potential Long-nosed Potoroo habitat mapped in the far north coast study area. All habitat qualities are displayed in purple with a thick outline so that the areas can be seen at the scale of the far north coast.

Table 2. The area, tenure, status and historical summary of the 10 areas mapped as potential Long-nosed Potoroo habitat on the far north coast.

Location	Hectares of total potential habitat (% of total)	Hectares of high quality (Class I) habitat (% of high quality)	Tenure*	Status and history of observations
Arakwal	45 (1%)	0	100% Arakwal National Park	Unlikely to be extant. Small amount of suitable habitat; never recorded.
Billinudgel	87 (2%)	0	86% Billinudgel Nature Reserve 14% Freehold	Possibly extant. Only a small amount of suitable habitat; 1987 unconfirmed record (A. Benwell, G. Opit pers. comm.); 1994 road-kill record at South Golden Beach (B. Law pers. comm.); not recorded in small-scale camera-trap survey 2012 (M. Andren unpubl. data 2012).
Cobaki Lake	206 (6%)	106 (11%)	93% Crown Land 7% Freehold	Extant. Recorded 1992 (Warren 1992); 1993 trapping (Mason 1993); 2003 trapping and radio-tracking (Bali et al. 2003); possible diggings 2005 (P. Parker pers. comm.).
Cudgen Lake	135 (4%)	49 (5%)	83% Freehold 17% Cudgen Nature Reserve	Possibly extant. 1988 trapping (Milledge 1988); 2004 observation (Callaghan et al. 2004); not recorded in surveys since (e.g. Goldingay et al. 2006).
Hastings Point	46 (1%)	0	50% Freehold 46% Cudgen Nature Reserve 4% Freehold	Unlikely to be extant. Some suitable habitat; never recorded.
Lennox Head	499 (14%)	0	41% Freehold (JLALC) 35% Crown Land 24% Freehold	Possibly extant given large amount of habitat, but none known to be of high quality. 1971 road-kill (Schlager 1981); not recorded in small scale camera-trap survey 2012 (M. Andren unpubl. data 2012).
Skidders Shoot	24 (1%)	0	100% Freehold	Unlikely to be extant. Very small amount of habitat; 1995 possible diggings (Milledge et al. 1995).
Ti-Tree Lake	64 (2%)	35 (4%)	47% Crown Land 40% Freehold 13% Ti-Tree Lake Aboriginal Area	Possibly extant but only small amount of suitable habitat. 1993 possible record from hair analysis (Parker 1993).
Tyagarah / Brunswick Heads	1,098 (30%)	434 (45%)	54% Tyagarah Nature Reserve 33% Freehold 8% Crown Land 5% Brunswick Heads Nature Reserve	Tyagarah: Extant? 1985 trapping (Milledge et al. 1986); 1992 trapping (Mason 1997); 2004 trapping (Parker 2005); not recorded in recent surveys 2009 (Goldingay & Lindsay 2009, D. Scotts unpubl. data), 2011 (N. Graham pers. comm.) or 2012 (Lake 2012). Brunswick Heads: Probably extant. 1992 trapping (Milledge & McKinley 1992); 2000 trapping (Milledge 2000); 2004 trapping record (B. Taylor); not recorded in recent surveys 2009 (D. Scotts unpubl. data) or 2011 (N. Graham pers. comm. 2012).
Wardell	1,423 (39%)	345 (36%)	61% Freehold (JLALC) 35% Freehold 5% Crown Land	Extant. 1980 and 1981 specimens (Schlager 1981); Graham and Morrison (2009); 12 localities found in 2009-12 camera-trap survey (M. Andren unpubl. data).
TOTAL	3,613	969	32% Freehold 30% Freehold (JLALC) 23% NPWS Reserves 15% Crown Land	

* Although the tenure of most of the 368 cadastral polygons involved in this study was known, some were not. These figures are therefore not exact, but they are likely to be close to the true value. For each location, tenure was divided into: Freehold Land; Freehold Land owned by the Jali Local Aboriginal Land Council (JLALC); NSW National Parks and Wildlife Service (NPWS) reserves; Crown Land.



Figure 7. (a) David Milledge examining a Long-nosed Potoroo trapped on the edge of swamp sclerophyll at Tyagarah in 1985 (b) Mick Andren setting up a camera-trap in Scribbly Gum-Wallum Banksia heathy woodland (camera attached to Banksia trunk, centre image) in 2012. Photos, (a) P. Parker and (b) D. Milledge.

historically occupied areas, four cannot be assumed to currently support a population. These are Lennox Head (where there are no records since 1971), Billinudgel, Ti-Tree Lake (both of which only contain unconfirmed records) and Skinner's Shoot (indirect evidence from diggings). The amount of habitat at Billinudgel (87 ha), Ti-Tree Lake (64 ha) and Skinner's Shoot (24 ha) is very small and Ti-Tree Lake is the only one of the four areas considered to contain any high quality habitat (but

only 35 ha). A significant amount of potential habitat, almost 500 ha, does occur at Lennox Head, but none is currently considered to be of high quality (although this does need to be confirmed through further survey). Therefore, six of the ten areas may be below the size and condition (in terms of the amount of high quality habitat available) required to support a resident population of the species in the long term.

Cudgen Lake is one of only four Long-nosed Potoroo populations that have been confirmed to be extant on the far north coast since 2000, with the most recent observation made in 2004. However, subsequent surveys have been unsuccessful in locating the species (Goldingay *et al.* 2006). Consequently, a proposal to list the Cudgen Lake population as Endangered under NSW legislation failed due to a lack of evidence that the population is still extant (NSW Scientific Committee 2007). The total amount of habitat mapped at Cudgen Lake is only 135 ha, of which only 49 ha is considered to be high quality; coastal development appears to have significantly reduced the size and quality of the habitat in the area. While some habitat is protected in Cudgen Nature Reserve (31 ha), a fire in September 2012 burnt 60% of this, including all the Scribbly Gum woodland habitat mapped in the Reserve. Additionally, a major development is planned immediately adjacent to the remaining habitat. This demonstrates the potential vulnerability of small and isolated populations and the area urgently requires further targeted survey for the species.

The key remaining populations therefore appear to be those located at Cobaki Lake, Tyagarah/Brunswick Heads and Wardell. The persistence of the small Cobaki Lake population (estimated by Bali *et al.* (2003) and Lewis and Freestone (2009) at only 55–85 individuals) in the long-term is uncertain given the likely direct and indirect impacts from the major development planned immediately adjacent to the small habitat area (190 ha). Recent impacts include the construction of a residential access road and realignment of the Pacific Highway, together with the loss of an area of high quality habitat (old growth Scribbly Gum woodland). However, there is now a Long-nosed Potoroo management plan for the area (Lewis and Freestone 2009) that provides some optimism for the persistence of this small population.

Tyagarah Nature Reserve is the most important reserve managed by the NPWS for Long-nosed Potoroo conservation on the far north coast, containing 54% of the habitat of the important Tyagarah/Brunswick Heads population. Potoroos were recorded in both reserves in 2004, but again, more recent surveys to confirm the presence of the species have been unsuccessful (Goldingay and Lindsay 2009; Lake 2012). Greater survey effort is still required to properly assess the status of this population.

The protection of habitat on private property is clearly crucial for the conservation of the Long-nosed Potoroo on the far north coast, with approximately 62% of the total area of potential habitat occurring on private property across the region. The Jali Local Aboriginal Land Council owns approximately half of the total area on private property, including 61% of the highly



a. Ngunya Jargoan



b. Long-nosed Potoroo survey team employed by the Jali Local Aboriginal Land Council.

significant Wardell habitat. This area is also subject to impacts from coastal development, including increased fragmentation due to the upgrade of the Pacific Highway. However, the Long-nosed Potoroo is an icon of this area (Fig. 8a), where habitat is protected by an Indigenous Protected Area agreement (Ngunya Jargoan Indigenous Protected Area) finalised in 2013. The Land Council is employing the local community to continue potoroo surveys (Fig. 8b) in order to accurately establish the extent of the population on their land. With an informed approach to private land conservation, they are aiming to develop and implement a conservation management plan for the species.

The Long-nosed Potoroo is subject to numerous threats on the far north coast. Habitat loss, fragmentation and degradation from coastal development remains a fundamental threat to the species. Additional associated threats such as increased predation pressure when habitat is opened up and inappropriately applied fire removing vegetation cover too frequently or over large areas are also very likely to impact Long-nosed Potoroo populations. The complex and interrelated roles of these threats are recognised as key considerations for the conservation management of the species in the region.

Despite the small populations and prevailing threats, we believe that with concerted action in some key remaining areas, conservation of the Long-nosed Potoroo on the far north coast remains a realistic goal. Therefore, we urgently recommend (i) surveying all locations of historical records where potoroos have not been recently recorded (such as Billinudgel, Brunswick Heads, Cudgen Lake and parts of Tyagarah Nature Reserve) and (ii) undertaking a conservation assessment of the species in the region to re-assess its status. Research into the decline of the species (such as the role of predation and changed fire regimes), the genetic relationships of the populations on the far north coast (such as the possible divergent northern mainland lineage suggested by Frankham *et al.* (2012)) and local food resources are also needed, together with increased funding for the targeted conservation management of key populations.

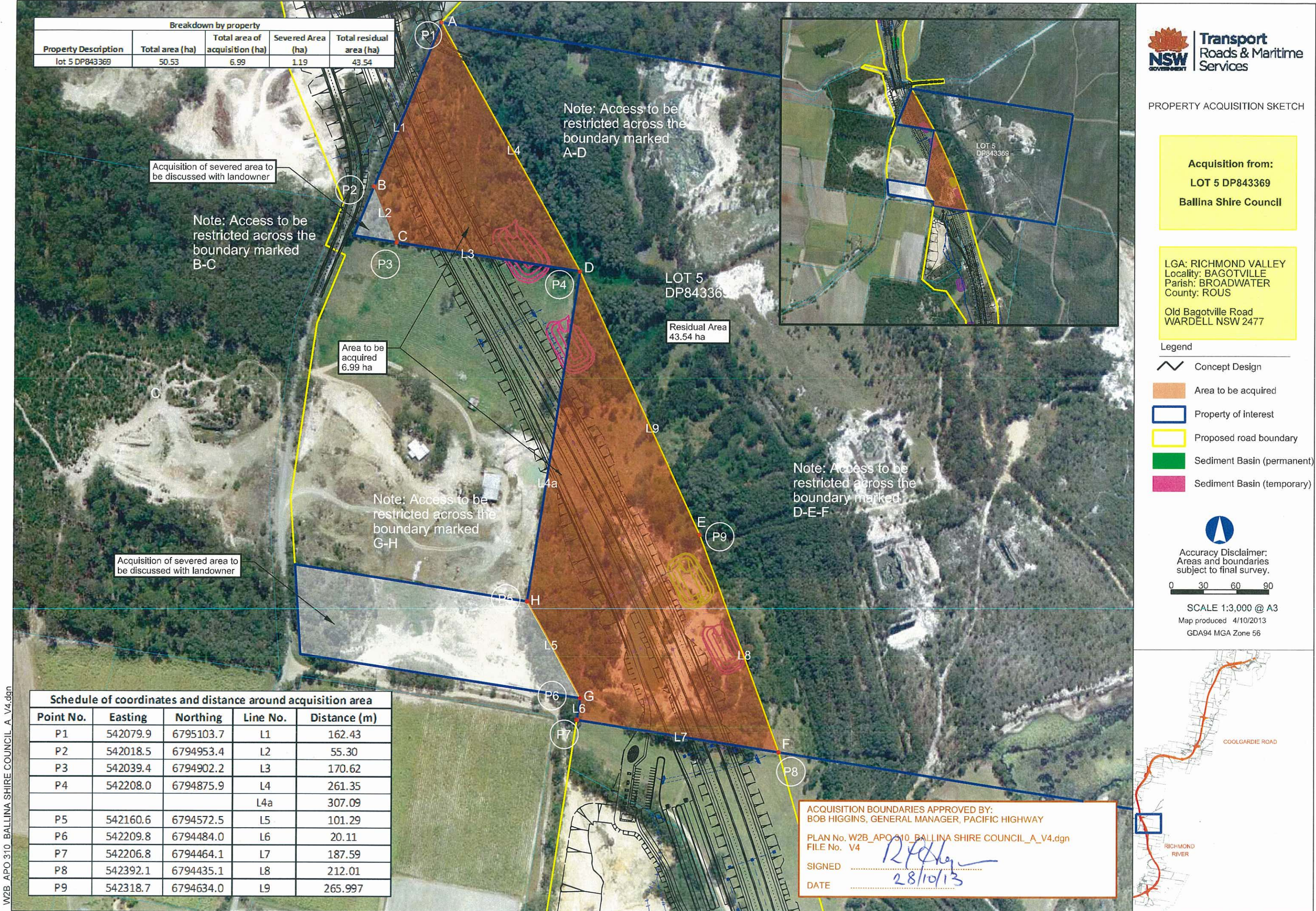
Acknowledgments

The Ecosystems and Threatened Species Unit of the NSW Office of Environment and Heritage (OEH) at Coffs Harbour is thanked for providing the opportunity for Mick Andren and Jill Smith to participate in this study. The views expressed are those of the authors and not necessarily those of the OEH. Mick Andren is also grateful for the opportunity extended by the Jali Local

Aboriginal Land Council to survey potoroos on their Wardell property. Marcus Ferguson and the rest of the Wardell field crew are particularly thanked. We also thank Ben Lewis and Mark Graham for their assistance in the mapping of habitat at Cobaki Lake and Wardell, Peter Parker for information relating to his records and Ernst Kemmerer for his comments on the draft manuscript.

References

- Amos, P.J. 1982. The potoroo in Queensland. *Queensland Agricultural Journal* 108: 5-6.
- Bali, R., Lewis, B. and Brown, K. 2003. *The status and distribution of the Cobaki Long-nosed Potoroo population*. Tugun Bypass Environmental Impact Statement Technical Paper Number 12.
- Bennett, A.F. 1993. Microhabitat use by the Long-nosed Potoroo, *Potorous tridactylus*, in remnant forest vegetation of south-western Victoria. *Australian Wildlife Research* 20: 267-85.
- Bennett, A.F. and Baxter, B.J. 1989. Diet of the Long-nosed Potoroo, *Potorous tridactylus* (Marsupialia: Potoroidae), in south-western Victoria. *Australian Wildlife Research* 16: 263-71.
- Callaghan, J., de Jong, C. and Mitchell, D. 2004. *Kings Forest Preliminary Assessment Report*. Unpublished draft report to Tweed



W2B_APO 310 BALLINA SHIRE COUNCIL_A_V4.dgn