

INVOICE SENT
TO ACCOUNTS



Date: 27 March 2014
Our Ref: 13/189

General Manager
Ballina Shire Council
PO Box 450
BALLINA NSW 2478

Attention: Mr Paul Tsikleas

RECORDS
SCANNED
31 MAR 2014
Doc No.....
Batch No.....

Dear Sir,

**Re: Proposed LEP Amendment - Wollongbar Urban Expansion Area
Lots 5 & 6 DP 1161720 - Rifle Range Road, Wollongbar.**

Please find enclosed a copy of our submission to Ballina Shire Council's Strategic & Community Facilities Group regarding the proposed revised zoning arrangements for the above land for consideration via a Gateway Planning Proposal.

We shall continue to monitor the submission and will advise you upon receipt of any correspondence from Council.

Also enclosed is our professional memorandum of fees in this matter.

Should you have any queries concerning this project, please contact Ms Karina Vikstrom on (02) 6622 1011.

Yours Sincerely,
NEWTON DENNY CHAPELLE

KARINA VIKSTROM
Town Planner. BTP.

JOHN NEWTON B. Surv. M.I.S. Aust. TONY DENNY B. Surv. (Hons) M.I.S. Aust. DAMIAN CHAPELLE BTP CPP
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Newton Denny Chapelle

Date: 25 March 2014 SURVEYORS PLANNERS ENGINEERS
 Our Ref: 13/189

General Manager
 Ballina Shire Council
 PO Box 450
 BALLINA NSW 2478

COPY

Attention: Mr Klaus Kerzinger

Dear Sir,

**Re: Proposed LEP Amendment – Wollongbar Urban Expansion Area
 Adjustment of Zone Boundaries for Lots 5 & 6 DP 1161720.**

A. INTRODUCTION

We refer to NDC's letter dated 8 October 2013 regarding the above matter together with various email and telephone communications regarding the project.

As you are aware, in December 2013 Council's Commercial Services Committee considered a report regarding the proposed Master Plan and zoning framework for the site. At this meeting, the Committee resolved to adopt a revised zoning pattern from that submitted in October 2013. The revision related to a preference to provide the preferred site for a childcare centre/preschool with a residential zone (rather than an open space zone) to facilitate financing opportunities for future childcare providers.

The purpose of this letter is to formally submit two options for the proposed revised zoning arrangement to Council's Strategic and Community Facilities Group for consideration via the Gateway Planning Proposal for the site. This letter also provides further justification with respect to the proposed zoning framework.

B. PROPOSED ZONING FRAMEWORK

Two plans (Option 1 & Option 2) are **attached**, which outline two possible zoning frameworks to accommodate the future development of the site. Broadly speaking, Option 1 is generally consistent with the approach adopted by Council's Commercial Services Committee in December 2013. Option 2 has been prepared as an alternate approach for Council's consideration.

Table 1 provides a breakdown of the existing zone areas pursuant to the Ballina Local Environmental Plan 2012 (BLEP 2012) compared to that proposed via Options 1 and 2.

Zone	Existing Zone Area (Current BLEP 2012)	Proposed Zone Area (Option 1)	Proposed Zone Area (Option 2)
R2 – Low Density Residential Zone	-	.06ha	.06ha
R3 – Medium Density Residential Zone	4.74ha	5.13ha	5.43ha
RE1 – Public Recreation Zone	1.81ha	1.36ha	1.06ha
Total	6.55ha	6.55ha	6.55ha

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Under both Options 1 & 2, all areas proposed for residential development have been allocated the R3 Medium Density Residential Zone. This approach is consistent with the zoning applied to residential development throughout the rest of the Wollongbar Urban Expansion Area. Similarly, under both Option 1 & 2, a small sliver of land proposed for widening of Rifle Range Road has been allocated the R2 Low Density Residential Zone, consistent with the zoning applied to the rest of Rifle Range Road in this location.

The difference between Options 1 & 2 relates to the zone framework to be applied to the large allotment (identified as Lot 41 on the Subdivision Master Plan) located at the corner of Rifle Range Road and Plateau Drive. In this regard, the development of Lot 41 is intended to involve the following three elements:

1. a park with an area of approximately 10,000m² (1 hectare);
2. a childcare centre/preschool located on a parcel approximately 3,000m²; and
3. a stormwater management area approximately 3,025m² in size.

Two broad zoning options are available to accommodate this arrangement. These options are summarised in **Table 2**.

Table 2 – Zoning Options (Lot 41)

Land use	Area	Option 1	Option 2
Park	10,000m ²	RE1 – Public Recreation Zone	RE1 – Public Recreation Zone
Childcare Centre/ Preschool	3,000m ²	R3 – Medium Density Residential Zone	R3 – Medium Density Residential Zone
Stormwater Management	3,025m ² (see note below)	RE1 – Public Recreation Zone	R3 – Medium Density Residential

Note: The options considered by Council's Commercial Services Committee in December 2013 identified that approximately 2,075m² was required for stormwater management purposes. However, during the construction certificate processes for DA 2013/302 (being the 15 lot subdivision to the west of Plateau Drive), Council's Civil Services Group advised that a greater quantum of stormwater attenuation was required to service the subdivision than had been proposed within the development application. Given the topography and site characteristics, the preferred design response involves an expansion of the stormwater management area on Lot 41. This in-turn triggered a minor adjustment to the location and configuration of the proposed childcare centre site.

It is important to note that regardless of the zoning option selected for Lot 41, the development outcome "on the ground" will be the same. As such, our clients are able to work within either zone arrangement.

However, Option 2 provides greater flexibility to adjust the future boundaries between the stormwater management area and the childcare centre/preschool site following design of both land uses. This flexibility is considered important, particularly given that no detailed consideration has been given to the design of these elements. Furthermore, the application of a residential zone to the stormwater area will reflect the intended form and function of this area as landscaped drainage infrastructure (as opposed to "open space" for recreation). As such, Option 2 is considered (from a development perspective) to be the preferred approach for the site. Council will need to determine whether or not this approach is also consistent with its expectations for the future development of this property.

C. PROPOSED LAYOUT AND SITE DESIGN

As advised above, the detailed site layout and landscape design of Lot 41 is yet to occur. However, it is our client's intention that the precinct will be subject to an integrated

landscape plan which will ensure that the area presents visually as a cohesive unit. This landscape plan will include consideration of matters such as:

- **Presentation of stormwater management area** – The stormwater management area at the northern end of the site has yet to be the subject of detailed engineering and design. However, it is envisaged that it will involve a linear basin which will provide detention functions on an intermittent basis (ie. it will not be a permanent water body). Given the topography of the site, the construction of the basin will involve various site works, including contouring and retaining walls. These works will be developed in conjunction with a landscape architect to ensure that the area also presents as an "entrance statement" to this part of the WUEA.

The detail design of this infrastructure is expected to occur as part of the subdivision design for the next stage of the residential land release (Stage 2). Given that this may result in changes to the configuration of the stormwater management area, it is suggested that zoning Option 2 represents the preferred approach for the site.

- **Opportunities for shared car parking** – Opportunities may be available to provide shared car parking and access for the proposed childcare/preschool site and the open space area. Engineering design will need to occur to ensure access arrangements are compliant with relevant standards.
- **Play equipment and skate park** – The site provides a number of opportunities for children's play equipment and a small skate park. These will be integrated into the overall landscaping of the Precinct.
- **Pedestrian connectivity** – the landscape plan will need to ensure that pedestrians can move through the precinct in a safe manner and one that provides logical linkages to the external pathway network.

D. RELATIONSHIP TO EXISTING S94 CONTRIBUTIONS PLAN

Ballina Shire Section 94 Contributions Plan 2008 (BSCP 2008) identifies that approximately 6.75 hectares of land is required to service future the open space and community facility requirements of the Wollongbar community. This area is broken down as follows:

- 2ha for a District Park, with this park nominally located on the site currently proposed for rezoning;
- 1 hectare for the purpose of netball/tennis courts, with these facilities also located on the site currently proposed for rezoning;
- 3.5 hectares of land in a non-specified location for the purpose of playing fields; and
- 2,500m² for community facilities such as a community hall, meeting room or childcare centre.

Since the adoption of BDCP 2008, there has been a significant change in Council's strategy for the provision of open space and community facilities in the Wollongbar area. In this regard, the purchase and development of the Wollongbar Sports Fields site provides in excess of 13 hectares of land able to accommodate this infrastructure. The development plans for the site include playing fields (for both football and cricket), tennis and netball courts and a combined club house.

It is understood that Council is currently reviewing BSCP2008. This review will provide Council with the opportunity to update the works schedule within the Contributions Plan to more accurately reflect the current approach to active open space and community facility provision to service the Wollongbar community.

Notwithstanding the above, the zoning framework proposed in the attached options provide

for approximately 1 hectare (excluding the stormwater management area) of land zoned and suitable for a substantial park facility to service the local community. It also provides for land for important community infrastructure in the form of a childcare centre or preschool. As such, the site will be able to continue contribute in a significant manner to community and open space requirements in Wollongbar.

E. CONCLUSION

We trust that the above material provides sufficient information for the Strategic and Community Facilities Group to proceed to prepare the planning proposal for the site. Our clients are keen to advance the rezoning and look forward to your early consideration of this matter. Should you have any queries concerning this project, please contact Ms Karina Vikstrom on [02] 6622 1011.

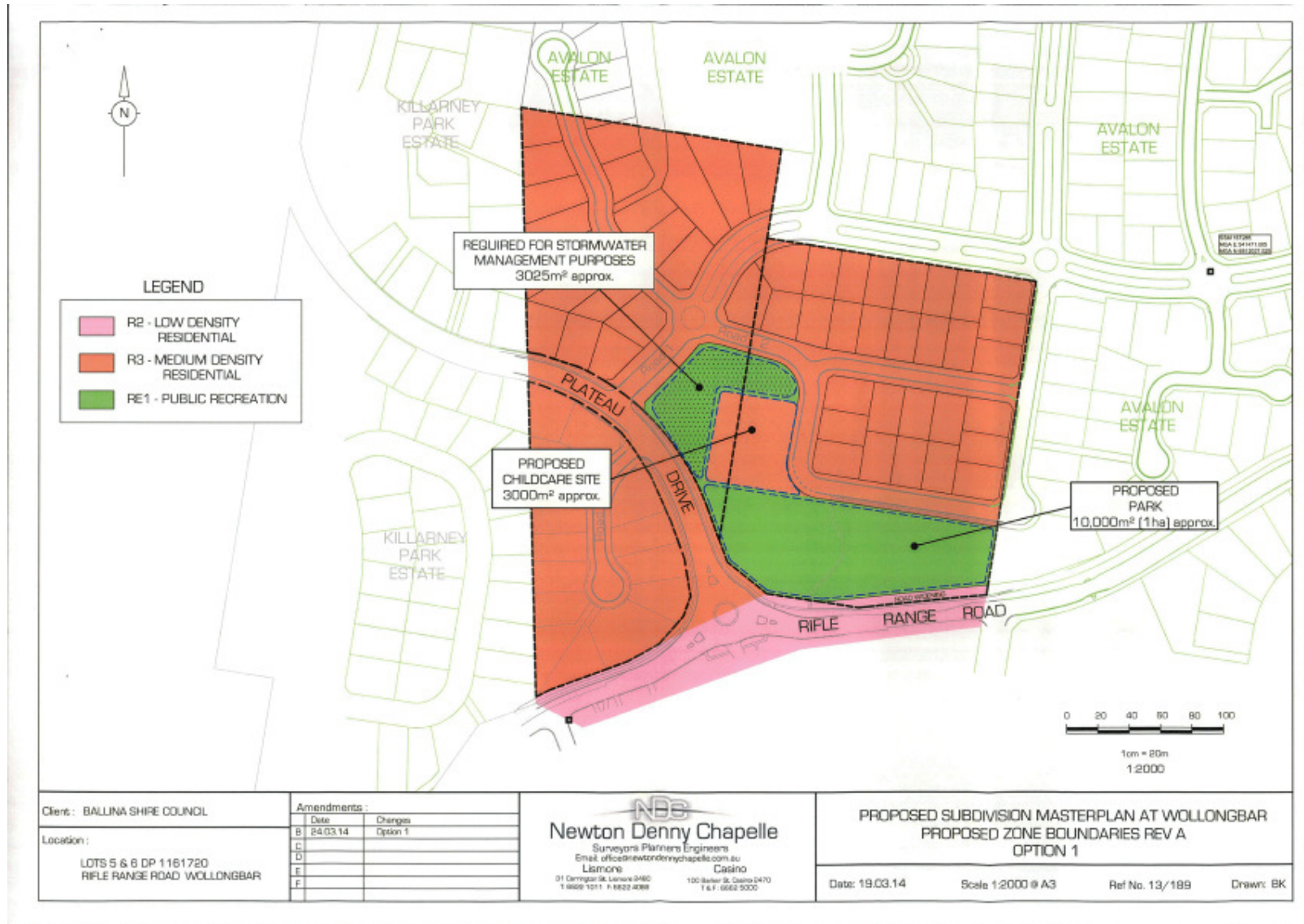
Yours Sincerely,

NEWTON DENNY CHAPELLE

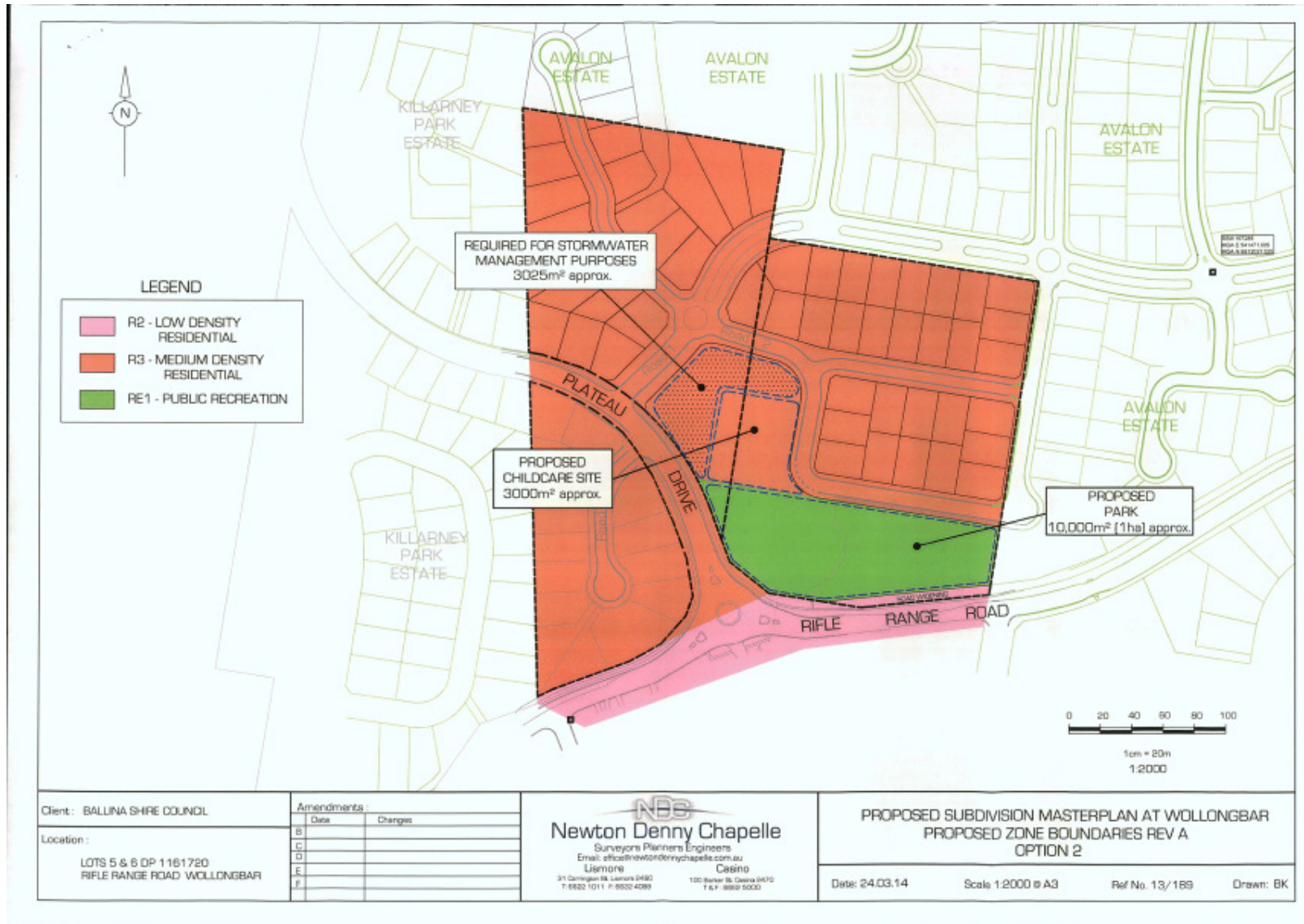


KARINA VIKSTROM
Town Planner, BTP.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC



9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC





Planning Proposal – June 2014

Corner Rifle Range Road and Plateau Drive, Wollongbar

Lots 5 and 6 DP1161720

Planning Proposal – June 2014
Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar

Council / Gateway
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INTRODUCTION

Summary of Planning Proposal

This planning proposal relates to Lots 5 and 6 DP 1167120 (Lots 5 and 6) Rifle Range Road and Plateau Drive, Wollongbar.

Lot 6 is zoned part RE1 Public Recreation and part R3 Medium Density Residential whereas the whole of Lot 5 is zoned R3 Medium Density Residential under the provisions of Ballina Local Environmental Plan 2012 (BLEP2012).

The location of the subject land is shown in Figure 1 below and on the Site Identification Map in Appendix 1.



Figure 1 Location Plan

Lots 5 and 6 are owned by Ballina Shire Council. The need for the planning proposal has arisen as a consequence of Council's desire to reconfigure and reduce in size the RE1 Public Recreation zoned land on Lot 6, and to specifically designate land suitable for a child care centre and for drainage purposes within this estate.

The land proposed to be utilised for a child care centre and the land required for drainage purposes are proposed to be zoned R3 Medium Density Residential.

The reconfiguration of the proposed RE1 zoned land will result in this land having a more functional shape so as to enable it to serve as an estate entryway as well as for district park purpose.

The planning proposal also proposes to resolve a minor zoning anomaly by proposing to rezone a small area of proposed road widening, forming part of Lot 6, from RE1 Public Recreation to R2 Low Density Residential under the provisions of BLEP2012.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC

An amendment to the Minimum Lot Size Map is also proposed to ensure that this map consistently reflects the minimum lot sizes currently applicable to the land zones within the Wollongbar Urban Expansion Area (WUEA) following the zone reconfigurations proposed.

Planning Context

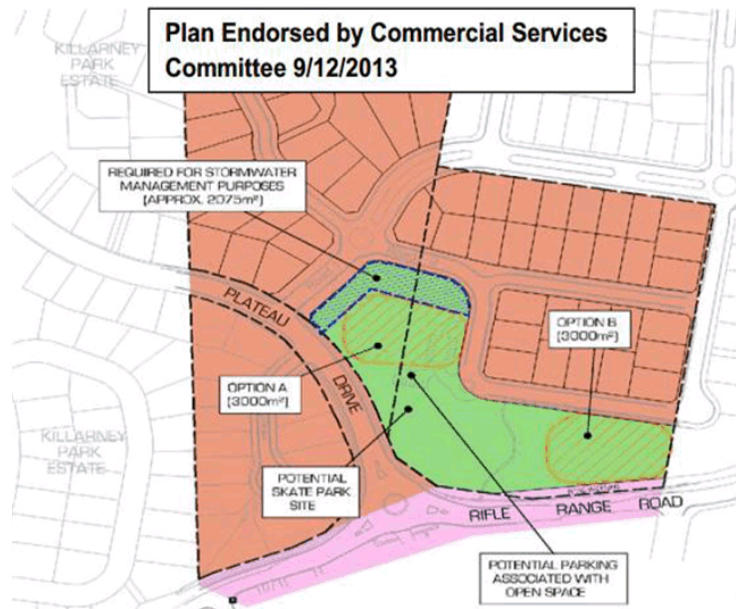
Council Resolutions – Planning Proposal

Council's Commercial Services Committee initially considered options for the development of Lots 5 and 6 at its meeting on 26 March 2013. At that meeting the Committee recommended that a planning proposal be initiated to adjust the configuration of residential and open space zoned land on these lots through a rezoning.

The above recommendation was adopted by Council at its Ordinary Meeting held on 28 March 2013 (Minute No. 280313/33).

Council's Commercial Services Committee again considered issues relating to the Master Plan for Stage 3 of Council's Wollongbar Residential Estate at its meeting on 9 December 2013. At that time development opportunities for a childcare facility were considered. The Committee recommended that the submission of a planning proposal be authorised which proposed that an area of land referred to as Option A be zoned R3 – Medium Density for use as a childcare facility.

The plan below is an extract from the plan endorsed by the Commercial Services Committee at its meeting on 9 December 2013 which shows the location of Option A. This plan is based on the subdivision master plan for Lots 5 and 6 which is contained in Appendix 4.



Planning Proposal – June 2014
Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar

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The above recommendation was adopted by Council at its Ordinary Meeting held on 19 December 2013 (Minute No. 191213/26).

In response to the above, consultant's Newton Denny Chapelle submitted additional information on behalf of Council's Commercial Services Section on 25 March 2014 (Appendix One).

This planning proposal was prepared based on the information contained within the submission from Newton Denny Chapelle dated 25 March 2014 and endorsed by Council for Gateway determination at its Ordinary Meeting on 26 June 2014 [Minute No]. Appendix 5 contains a copy of the report to Council.

Consistency with Strategic Planning Policy

The reconfiguration of the RE1 Public Recreation zone and the application of a R2 Low Density Residential zone to part of the subject land required for road widening is generally consistent with both Council and State Government urban planning policy. The following provides an overview of the proposed amendment with respect to key planning policy documents.

Far North Coast Regional Strategy (FNCRS)

The reconfiguration of zones as proposed is considered to be consistent with the FNCRS.

The subject land is identified as being located within the existing urban footprint of Wollongbar. The proposed zone boundary reconfiguration is generally consistent with the nominated policy responses contained within the Regional Strategy. Specifically the proposal is consistent with relevant settlement and housing actions as well as neighborhood design principles.

Ballina Shire Growth Management Strategy 2012 (GMS)

The Ballina Shire Growth Management Strategy 2012 provides the strategic planning context for urban development in Ballina Shire. The planning proposal is consistent with Council's Growth Management Strategy. The subject land forms a part of the Wollongbar Urban Expansion Area (WUEA).

The proposal at a zoning level is generally consistent with the Growth Management Principles related to desired identity, character and amenity, avoidance and mitigation of potential for land use conflicts, integration of urban development with key infrastructure facilities, and recognition of diverse land uses in urban areas.

Ballina Local Environmental Plan 2012 (BLEP 2012)

The BLEP 2012 applies the following zones to the subject land:

- Lot 5 DP 1167120 - R3 Medium Density Residential zone. Lot 5 has a total area of 4.201ha.
- Lot 6 DP 1167120 – part R3 Medium Density Residential zone and part RE1 Public Recreation zone. Lot 6 has a total area of 3.779ha of which 1.81ha is zoned RE1 Public Recreation.

Map 2 in Appendix 1 shows the zones that currently apply to Lots 5 and 6

Key Site Issues

Key site planning issues identified in relation to the proposal to date include the following:

Key Issue	Summary
Land slip	Part of Lot 5 is designated as a Category 5 land slip area on maps prepared by geotechnical consultants Coffey Partners Pty Ltd. This issue is however of no direct relevance to this planning proposal as the reconfiguration of zone boundaries and rezoning of road widening required land does not affect that part of lot 5 identified on the land slip map. No further investigation is considered warranted as part of the planning proposal process.
Contamination assessment	A preliminary contamination assessment of the subject land has been undertaken and is contained in Appendix 3. The assessment concluded that there is no significant risk of harm to end users arising from the proposed change of use and residential subdivision. Matters arising from above assessment will be further considered as part of the development assessment process.

The land slip and contamination issues do not warrant further assessment as part of the planning proposal process.

PART 1 – OBJECTIVES & INTENDED OUTCOMES

The objective of the planning proposal is to reconfigure the residential and public recreation zones that currently apply to the land, make consequential amendment to the Minimum Lot Size Map, and to resolve a minor zoning anomaly relating to the zoning applicable to land required for road widening.

PART 2 – EXPLANATION OF THE PROPOSAL

The planning proposal relates to two Council owned lots. It is proposed to reconfigure the RE1 Public Recreation zoned land located within Lot 6 from its current north-south rectangular configuration to an east – west configuration. A reduction in the area zoned as RE1 Public Recreation is also proposed from 1.81ha to approximately 1ha. Consequential amendments to the Minimum Lot Size Map are also required following the reconfiguration of zone boundaries.

It is also proposed to rezone a small section of land designated within Lot 6 for road widening from RE1 Public Recreation to a R2 Low Density Residential zone so as to achieve consistency with adjoining land.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC

Lots 5 and 6 were originally purchased by Council for investment purposes. As such the land is classified as *operational land* under the provisions of the *Local Government Act 1993*. Council, as the land owner, agreed to part of the land being zoned for open space purposes on the condition that it would be compensated for any foregone development opportunity.

During the preparation phase of BLEP 2012 a degree of uncertainty existed regarding the extent and configuration of the open space required within Lots 5 and 6 to support the open space requirements of the WUEA. This was because of Council's purchase of additional land for sporting fields and courts located to the east of Ramses Road and Hellyar Drive, Wollongbar.

Council purchased an additional 9.37ha of land in October 2011, for the sporting field project, bringing its total land holding to 13.85ha. The sporting fields are currently under construction.

The 13.85ha of land comprising the Wollongbar Sports Field site far exceeds the 4.5ha recommended to be provided for playing fields and courts within the 2008 Ballina Shire Open Space Study (BSOSS) and the Ballina Shire Contributions Plan 2008 (BSCP 2008).

Ballina LEP 1987 (BLEP 1987) zoned the whole of Lot 6 and part of Lot 5 as 6(a) Open Space. The BSOSS and the BSCP 2008 originally proposed that Lot 6 and part of Lot 5 be developed so as to incorporate a district park, community facilities and netball courts.

As a consequence of the acquisition of land associated with the sporting field project, the amount of land zoned under Ballina LEP 2012 for public recreation purposes was significantly reduced and confined to a rectangular shaped section within Lot 6. The area of the land currently zoned RE1 Public Recreation within Lot 6 is 1.81ha.

This planning proposal proposes a further reduction in the public recreation zoned land as well as its reconfiguration.

The proponent had originally proposed to designate an area of 1.66ha within Lots 5 and 6 as RE1 Public Recreation zone. This land was proposed to accommodate a child care facility as well as land required for drainage purposes associated with the adjoining residential subdivision.

The area proposed to be zoned RE1 was subsequently reduced to approximately 1ha. This was as a consequence of the proponent requesting that the land proposed to be used for the child care facility and for drainage purposes be zoned R3 Medium Density. The application of a R3 zone to land designated for the child care facility and for drainage arises from a desire to provide for flexibility relating to future boundaries between these uses.

The BSOSS recommends a minimum provision of 0.5ha per 1000 persons for district park purposes with a minimum site area of 1ha. On that basis a minimum of 1.25 ha of land for a district park would be required to service the needs of the proposed 2500 WUEA population.

An additional area of 2500m² is nominated in the BSCP 2008 for acquisition for community facilities.

The 1ha of RE1 Public Recreation zoned land now proposed to be provided within Lots 5 and 6 meets the minimum size requirements for a district park as recommended in the BSOSS.

The shortfall in district park land area, from that recommend in the BSOSS for the WUEA, and the land specified as required for a community facility within the BSCP 2008, will be considered as part of the current review of the BSCP 2008.

In the context of Council's land acquisitions associated with the Wollongbar Sports Field site (13.85ha) the shortfall of land area within Lots 5 and 6 for district park and community facility purposes is considered to be justified.

This planning proposal also addresses a minor zoning anomaly related to road widening which affects Lot 6. That part of Lot 6 which is subject to proposed road widening is zoned RE1 Public Recreation zone under the provisions of BLEP 2012. The adjoining Rifle Range Road is zoned R2 – Low Density Residential. It is proposed that the area within Lot 6, subject to road widening, also be zoned as R2 Low Density Residential.

Council at its Ordinary Meeting on 27 March 2014 considered a report which examined locations for a skate park at Alstonville. A number of potential sites were considered and Council resolved [Minute No. 270314/8] as follows:

1. *That based on the feedback received to date Council cease investigations into a site for a skate park at Alstonville for the time being and endorses the investigation of a consolidated skate park facility servicing the Alstonville Plateau within the Wollongbar Urban Expansion Area (WUEA).*
2. *That Council undertakes this additional investigation as part of the current master planning process being undertaken for Council-owned land in the Wollongbar Urban Expansion Area.*

The proposed open space within Lots 5 and 6 is being examined in terms for its suitability to locate the proposed skate park facility. The outcome of these investigations will determine whether it is feasible to locate a skate park within this proposed open space area and if so the anticipated size of such a facility. It is also proposed to examine an alternative location within the proposed Wollongbar Sports Field site as part of the skate park site suitability evaluation process.

PART 3 – JUSTIFICATION

Section A - Need for the Planning Proposal

1. Is the planning proposal a result of any strategic study or report?

The proposal is not the result of any strategic study or report.

The need for the planning proposal has arisen primarily as a consequence of Council's decision to purchase and develop a site for sporting fields and courts much larger than originally envisaged in 2008 when the BSOSS was prepared.

The district park now proposed to be provided on part of Lots 5 and 6 is reconfigured in shape so that it has greater utility as a district park, has less impact on residential lots and provides the opportunity to function as an estate entryway if this planning proposal is supported.

Council also proposes to site a private child care facility within Lots 5 and 6 adjoining the reconfigured public recreation land. The child care centre site has been accommodated within this planning proposal by reducing the amount of land proposed to be zoned RE1 Public Recreation and increasing the amount of R3 Medium Density zoned land.

It is noted that child care centres are permitted with consent within the RE1 Public Recreation zone. Zoning land as R3 Medium Density Residential is not necessary to permit a child care centre. The R3 Medium Density Residential zone is however considered to be more appropriate given that the child care facility proposed will be a private facility.

The review of BSCP 2008 scheduled for 2014 will examine alternative sites for s94 funded community facilities within the WUEA from the site previously nominated within Lots 5 and 6. There is therefore likely to be an increased potential for community facilities within the WUEA as a consequence of the private and public facilities proposed.

The proposal is consistent with Ballina LEP 2012 and the Ballina Shire Development Control Plan 2012.

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The planning proposal is considered to be the most appropriate means of securing the intended development outcomes for the land into the future.

Section B - Relationship to the Strategic Planning Framework

3. Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy (including the Sydney Metropolitan Strategy and exhibited draft strategies)?

The proposal is consistent with the Far North Coast Regional Strategy (FNCRS), which provides the regional framework for the consideration of policy development and the overall vision of the future. The proposal is not in conflict with the outcomes or actions of the strategy.

4. Is the planning proposal consistent with the local Council's Community Strategic Plan or other local strategic plans?

The planning proposal is consistent with the elements and specified outcomes of Council's Community Strategic Plan (CSP) as indicated in the table below:

Element and Reference	Outcomes	Benefits
Connected Community		
CC3.1	Provide equitable access to a range of community services and facilities	Increased satisfaction and participation rates. A healthier community.
CC3.2	Provide young people with a range of leisure activities along with opportunities for personal development	Increased satisfaction levels and higher youth and young adult retention.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC

Element and Reference	Outcomes	Benefits
Healthy Environment		
HE3.3	Match infrastructure with development	No under supply of community infrastructure.
Engaged Leadership		
EL2.1	Proactively pursue revenue opportunities savings and/or efficiencies	More financially viable Council resulting in improved asset management.

Ballina Local Environmental Plan 2012

Prior to the BLEP 2012 coming into effect, Lot 6 and a portion of Lot 5 were zoned 6(a) Open Space pursuant to BLEP 1987. Council reduced the amount of land zoned for public recreation purposes within these lots in BLEP 2012 significantly as a consequence of its land purchases associated with the Wollongbar Sports Field project. The proposed reconfiguration of the public recreation and residential zones within Lots 5 and 6 will result in superior planning and subdivision outcomes. To this extent what is proposed is consistent with BLEP 2012.

Ballina Shire Growth Management Strategy 2012

The Ballina Shire Growth Management Strategy 2012 provides the strategic planning context for urban development in Ballina Shire. The development of the land, to which the planning proposal relates, is consistent with this strategy. The subject land is located within the WUEA.

2008 Ballina Shire Open Space Strategy

The proposal satisfies the minimum 1ha district park area recommendation contained within the BSOSS. It does not satisfy the minimum area recommended to be provided for the WUEA based on the recommended provision rate of 0.5ha per 1000 people, which would require approximately 1.25ha of land to be provided.

This shortfall in area is considered to be justifiable on the basis of Council's substantial land purchases and development of the Wollongbar Sports Field site. It is also considered to be justified on the basis that an additional area of 3025m² is proposed to be provided for stormwater management purposes within Lots 5 and 6 given that such facilities are typically found within district level parks.

Ballina Shire Contribution Plan 2008 (BSCP 2008)

The planning proposal is inconsistent with the 3ha of land identified to be provided on the Wollongbar drive- in site for district park (2ha) and netball court (1ha) purposes.

The proposal is also inconsistent with the area nominated for acquisition for community facilities (2500m²).

The BSCP 2008 is however in need of revision given Council's land purchases associated with the Wollongbar Sports Field site and the fact that this facility will contain both regional and district level facilities. A Landscape Masterplan for the Wollongbar Sports Field Site is contained within Appendix Six.

The Wollongbar Sports Field site has an area of 13.85ha well in excess of the 4.5ha nominated for playing fields and courts within the BSCP 2008.

The BSCP 2008 is review is currently underway.

5. Is the planning proposal consistent with applicable State Environmental Planning Policies?

The proposal is generally consistent with applicable State Environmental Planning Policies (SEPP).

6. Is the planning proposal consistent with the applicable Ministerial Directions (S. 117 directions)?

The proposal is consistent with relevant Section 117 Directions. A Section 117 Direction checklist for the planning proposal is contained in Appendix 2.

Section C - Environmental, Social and Economic Impact

7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats will be adversely affected as a result of the proposal?

Lot 6 which is partly zoned RE1 Public Recreation under BLEP 2012 is the former Wollongbar drive-in site. The adjoining Lot 5 is former farm land currently zoned for medium density residential purposes. Council has no information which would suggest that the site contains any critical habitat or threatened species, populations or ecological communities, or that any such habitats will be adversely affected as a result of this planning proposal.

8. Are there any other likely environmental effects as a result of the planning proposals and how are they proposed to be managed?

No significant adverse environmental impacts are likely to arise as a result of the planning proposal.

9. How has the planning proposal adequately addressed any social and economic effects?

As a consequence of its minor nature, no broad positive or negative social or economic impacts are likely to arise as a result of the planning proposal.

Section D - State and Commonwealth interests.

10. Is there adequate public infrastructure for the planning proposal?

The planning proposal does not create the need for any additional public infrastructure.

11. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

Consultation will be undertaken with relevant agencies as specified in the Gateway determination during the public exhibition stage of the planning proposal.

PART 4 – MAPPING

As outlined above, the planning proposal involves amendment of the Zoning Map and consequential changes to the Lot Size Map, under the terms of the BLEP 2012, so as to reconfigure the R3 Medium Density Residential zone and the RE1 Public Recreation zone as they apply to Lots 5 and 6.

The planning proposal also proposes to apply an R2 Low Density Residential zone to a section of land required for road widening purposes within Lot 6.

The following maps, contained within Appendix 1, have been prepared to support this planning proposal:

- Map 1 – Site Identification Map illustrates the location of the subject land;
- Map 2 – Land Zoning Map illustrates the existing zoning of the land under the terms of the BLEP 2012 (LZN 001B Map);
- Map 3 – Land Zoning Map illustrates the proposed zoning of the land under the terms of the BLEP 2012 (LZN 001B Map); and
- Map 4 – Lot Size Map illustrates the proposed minimum lot size proposed for that part of the land proposed to be rezoned so as to achieve consistency with adjoining similarly zoned land under BLEP 2012 (LSZ 001B Map).

PART 5 – COMMUNITY CONSULTATION

It is proposed that this planning proposal will be exhibited in accordance with the Gateway determination and the terms of the *Environmental Planning and Assessment Act 1979*.

PART 6 – TIMELINE

The proposed timeline for completion of the planning proposal is as follows:

Plan Making Step	Estimated Completion (Before)
Gateway Determination	July 2014
Government Agency Consultation (If Required)	July 2014
Public Exhibition Period	August 2014
Public Hearing	N/A
Submissions Assessment	September 2014
RPA Assessment of Planning Proposal and Exhibition Outcomes	October 2014
Submission of Endorsed LEP to DoP&E for Finalisation	October 2014
RPA Decision to Make the LEP Amendment (if delegated)	Delegation not sought

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC

Plan Making Step	Estimated Completion (Before)
Forwarding of LEP Amendment to DoP&E for Notification (if delegated)	Delegation not sought

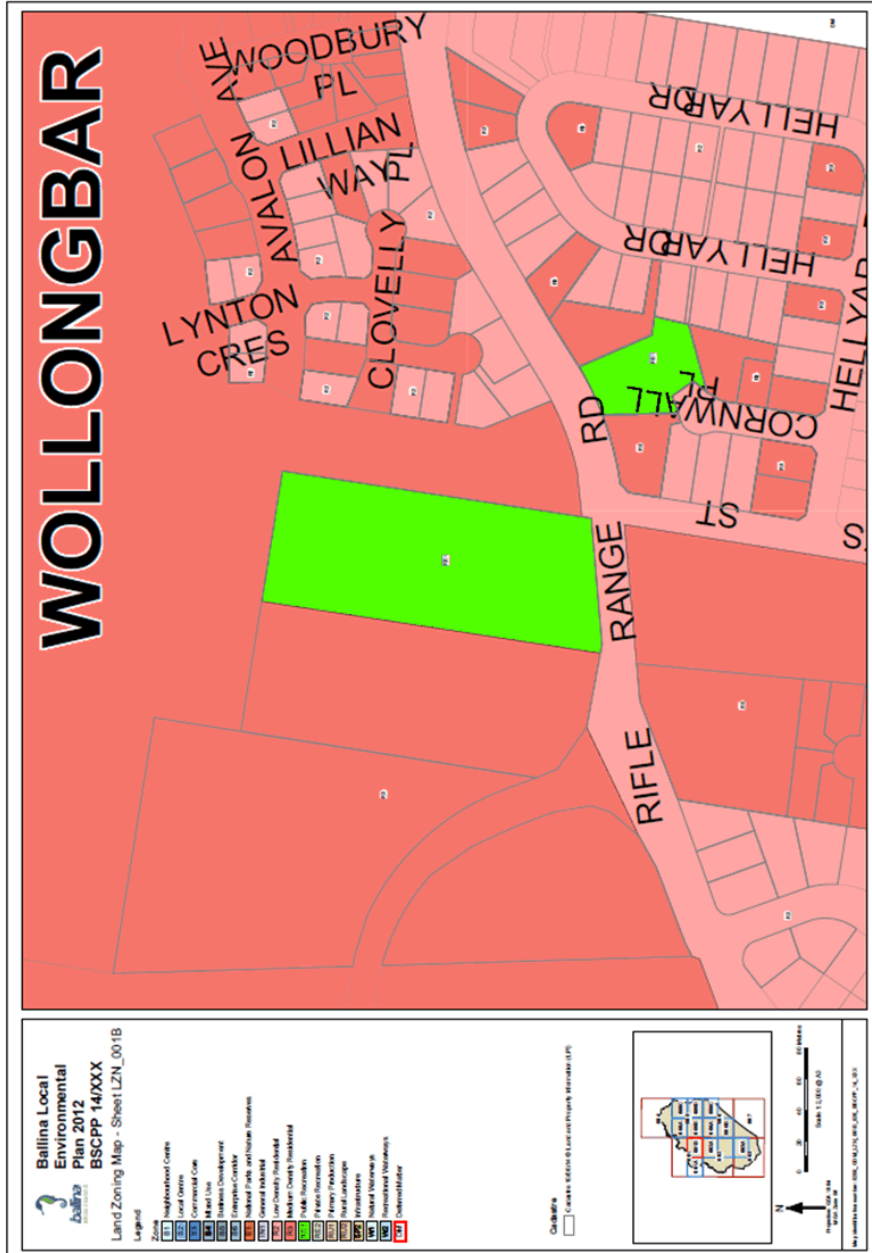
APPENDICES

Appendix 1 – Maps
Map 1 - Site Identification Map



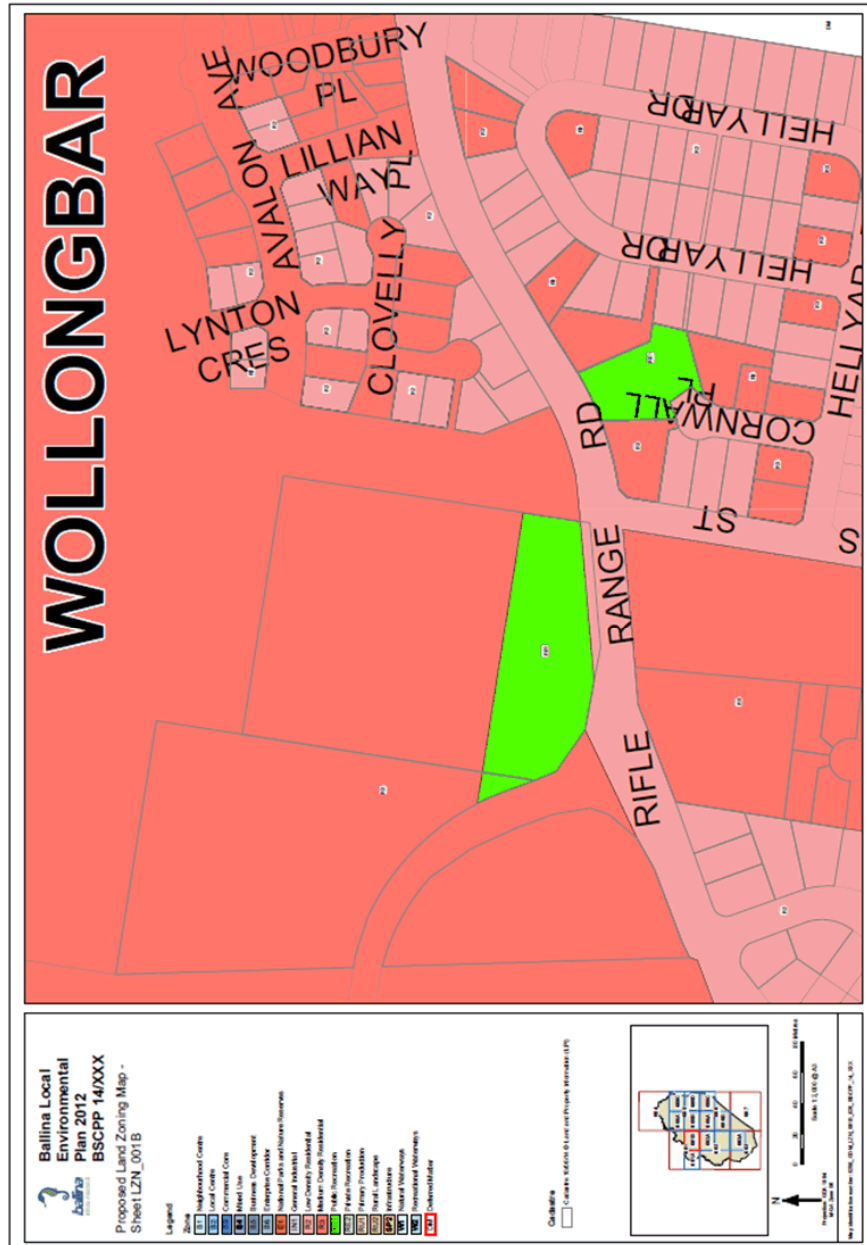
Planning Proposal – June 2014
Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar

Map 2 - Existing Land Zoning Map- LZN_001B



Planning Proposal – June 2014
Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar

Map 3 - Proposed Land Zoning Map – LZN_001B



Planning Proposal – June 2014
 Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar

Appendix 2 - Section 117 Direction Checklist

Section 117 Direction Checklist	
Planning Proposal – Lots 5 and 6 DP 1161720 Rifle Range Road and Plateau Drive, Wollongbar	
DIRECTION NO.	Compliance of Planning Proposal
1. Employment and Resources	
1.1 Business and Industrial Zones	Does not apply to planning proposal.
1.2 Rural Zones	Does not apply to planning proposal.
1.3 Mining, Petroleum Production and Extractive Industries	Does not apply to planning proposal.
1.4 Oyster Aquaculture	Does not apply to planning proposal.
1.5 Rural Land	Does not apply to planning proposal.
2. Environment and Heritage	
2.1 Environmental Protection Zones	Does not apply to planning proposal.
2.2 Coastal Protection	Consistent. BLEP 2012 contains relevant provisions.
2.3 Heritage Conservation	Consistent. BLEP 2012 contains relevant provisions.
2.4 Recreation Vehicle Areas	Does not apply to planning proposal.
3. Housing, Infrastructure and Urban Development	
3.1 Residential Zones	Consistent. The land is already partly zoned for residential purposes. The planning proposal provides for a range of dwelling densities on the subject land. The planning proposal seeks to align the residential zoning of the land with the proposed subdivision plan. The delivery of appropriate urban infrastructure to service the land will be secured through the Part 4 development application process. Standard Instrument clause 7.7 is applicable to the land in respect to essential services.
3.2 Caravan Parks and Manufactured Home Estates	Consistent. Existing caravan parks are not impacted by this planning proposal.
3.3 Home Occupations	Consistent. Home occupations are permitted within dwelling houses, without consent, pursuant to the Ballina LEP 2012.
3.4 Integrated Land Use and Transport	Consistent. The planning proposal provides for the reconfiguration of existing urban zones and is consistent with the Far North Coast Regional Strategy and Council's Growth management Strategy.
3.5 Development Near Licensed Aerodromes	Does not apply to planning proposal.
3.6 Shooting Ranges	Does not apply to planning proposal.
4. Hazard and Risk	
4.1 Acid Sulfate Soils	Does not apply to planning proposal.
4.2 Mine Subsidence and Unstable Land	Does not apply to planning proposal.
4.3 Flood Prone Land	Does not apply to planning proposal.

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4.4 Planning for Bushfire Protection	Consistent. The land is not bush fire prone land nor is it located within buffer areas to bush fire prone land.
5. Regional Planning	
5.1 Implementation of Regional Strategies	Consistent. The zoning of the land to permit residential development is consistent with the Far North Coast Regional Strategy.
5.2 Sydney Drinking Water Catchments	Does not apply to Ballina Shire.
5.3 Farmland of State Regional significance on the NSW Far North Coast	Does not apply to planning proposal.
5.4 Commercial and Retail Development along the Pacific Highway North Coast	Does not apply to planning proposal.
5.5 Development in the vicinity of Ellalong Paxton and Millfield (Cessnock LGA).	Revoked
5.6 Sydney to Canberra Corridor	Revoked
5.7 Central	Revoked
5.8 Second Sydney Airport: Badgerys Creek	Does not apply to Ballina Shire.
5.9 North West Rail Link Corridor Strategy	Does not apply to Ballina Shire.
6. Local Plan Making	
6.1 Approval and Referral Requirements	Consistent.
6.2 Reserving Land for Public Purposes	Consistent. The existing and proposed RE1 Public Recreation zoned land is already in the ownership of Council and therefore is not land shown on the Land Reservation Acquisitions Map.
6.3 Site Specific Provisions	Does not apply to planning proposal.
7. Metropolitan Planning	
7.1 Implementation of the Metropolitan Strategy	Does not apply to Ballina Shire.

Appendix 3 – Preliminary Contamination Land Assessment



**Preliminary Contaminated Land Assessment
For a Proposed Subdivision
at Lot 5 and 6 DP 1161720,
85 Rifle Range Rd, Wollongbar**



Date: 12th November 2013

Prepared for:

Newton Denny Chapelle on behalf of Ballina Shire Council

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.....
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1. Introduction

Melaleuca Group has been engaged by Newton Denny Chapelle on behalf of Ballina Shire Council to undertake a Preliminary Contaminated Land Assessment and prepare a report for part of Lot 5 DP 1161720 and all of Lot 6 DP1161720, 85 Rifle Range Rd, Wollongbar (the site; Figure 1) to accompany an application for the subdivision of the site. The total allotment area is approximately 8 ha (4.1 ha Lot 5; 3.9ha Lot 6), however the study area is approximately 6.55ha. As depicted in Figure 2, the site is currently vacant. Lot 5 is generally open grassland while Lot 6 consists of a disused Drive-in Theatre (Figure 3). Camphor Laurel trees line the fence lines. The investigation area consisted of the northern portion of Lot 5, north of Plateau Drive and the Lot 6 in its entirety. Field investigations focused across the area in a systematic pattern (Lot 5) and a targeted pattern (Lot 6).

The objective of this preliminary investigation has been to determine if land contamination has occurred from historical and current land use activities occurring on site or immediately nearby. To determine if the site poses a significant risk of harm to end users (and nearby sensitive receptors), soil samples have been collected and analysed for a range of contaminants typically associated with the land uses identified as having occurred on site. The results of the soil analysis are compared to relevant EPA acceptable levels in order to assess the significance of risk.

This investigation is to Stage 1 of the Managing Land Contamination Planning Guidelines (DUAP and EPA, 1998). If contamination levels exceed the adopted EPA acceptable levels, a detailed investigation is then required (i.e. a Stage 2 investigation). If the contamination levels are below the relevant acceptable levels, and information gathered as part of the investigation also supports that contamination was unlikely to have occurred; only a Stage 1 investigation would be required.

This preliminary investigation has been used to identify the following:

- Past and present potentially contaminating activities occurring on or near the site; and
- The presence of Potential Contaminants of Concern associated with the identified land uses.

The investigation will also:

- Discuss the site condition;
- Provide a preliminary assessment of the site's contamination status; and
- Assess the need for further investigations.

Relevant documents considered in the preparation of this investigation included:

- ANZECC and NHMRC (1992) *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*;
- Council of Standards Australia (2005) *AS 4482.1-2005 Guide to the sampling and investigation of potentially contaminated soil – Non-volatile and semi-volatile compounds*;
- NSW DEC (2006) *Contaminated Sites – Guidelines for the NSW Site Auditor Scheme 2nd Edition*;
- NSW EPA (1995) *Contaminated Sites – Sampling Design Guidelines*;
- NSW EPA (2011) *Guidelines for Consultants Reporting Contaminated Sites*; and

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- National Environment Protection Council (NEPC) (2013) *National Environment Protection (Assessment of Site Contamination) Measure*

This preliminary assessment report is written in accordance with NSW EPA (2011) *Guidelines for Consultants Reporting on Contaminated Sites* and the Northern Rivers Regional Councils (NRRC) *Regional Policy for the Management of Contaminated Land* (NRRC 2006).



Figure 1. Location and Study Area



Figure 2. Recent (2011) Aerial photograph of site.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC



Figure 3. Historical Aerial photograph (undated) of site showing general site features (Drive-in Theatre).

2. The Site

2.1 Site Identification

The Study Area is approximately 6.55 ha in size. Lot 6 is generally flat to gently sloping with a southerly aspect. Lot 5 consists of a steeper area and knoll. Generally Lot 5 has a southerly aspect. The study area is located on a ridgeline. The Study Area is bounded by Rifle Range Rd and Plateau Drive to the south. Farming land with natural landscape features bounds the Study Area to the north while on the remaining boundaries land is being developed (or developed) for residential purposes. The property is located in the catchment of the Willowbank Creek which through a series of watercourses ultimately drains to the Richmond River.

2.2 Zoning and Proposal

The investigation area is currently zoned R3 Medium Density Residential under the Ballina Shire Local Environmental Plan 2012 (BLEP2012). Surrounding lands are zoned R3 (east, north and west) or R2 Low Density Residential (south).

The indicative subdivision layout involves the subdivision of Lot 5 into approximately 20 residential lots and Lot 6 into 29 Lots (Figure 7). This includes civil works (inclusive of roads, water, sewer, drainage, electricity, telecommunications, bulk earthworks, acoustic and landscape works) as well as vegetation removal/management.

2.3 Site Usages

The site has been primarily unused for the several years. It is known that a dwelling was once located in the south-west corner of Lot 5 at least from the early 1980's. It is also known that a Development Application was granted by Council for the demolition of the building in February 2000 (DA 2000/644). It is unknown as to when the building was demolished or by what means. The area immediately surrounding this dwelling was the subject of a previous assessment (Melaleuca Group August 2013) as part of a subdivision proposal. That assessment proved that the demolition process had not resulted in contamination of the southern section of Lot 5. This dwelling lies well outside the current Study Area.

A review of historical aerial photography from 1987 was undertaken along with an undated aerial, thought to be from the 1990s and more recent aerials (2007 and 2011). The 1987 aerial photograph (Figure 4) shows the Drive-in Theatre with the screening room/amenities building in the centre and a small shed on the western boundary of Lot 6. Cropping is evident on Lot 5. The image is not sufficiently clear to indicate type of crop. This image shows the majority of the Study Area devoid of (large) treed vegetation indicating the site was predominantly cleared of native vegetation. It is not known when the Drive-in Theatre was constructed and prior to its construction prior land uses are unknown. It is surmised that Lot 6 would have been utilised for either similar cropping activities to that seen on Lot 5 or grazing purposes similar to lands to the east and north.

The undated aerial photograph through to be from the 1990's (Figure 3) shows the Drive-in Theatre still in existence (and potentially still in use), but cropping is ceased on Lot 5 and the area appears to be pasture used for cattle grazing. The 2007 image (Figure 5) shows the Study Area with similar land uses to that of the 1990's. However, the Drive-in Theatre appears not to be in use as the site

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appears unkempt. It is not known the date of closure of the Theatre but is estimated to be in the 1990's.

In 2011 (Figure 6), the Study Area within Lot 5 has remained grazing land. Lot 6 was utilised as a works compound for the construction of Plateau Drive. Since this time, Council utilised Lot 6 for the storage of various materials including concrete, fill, road base, gravel, inert building material, scrap metal and green waste (Appendix B). The majority of this material was cleaned up from the site along with the demolition of the screen room in January and February 2013. Some fill material was retained on the site as it was considered 'clean' and was considered a potential resource to be utilised into the future. Lot 5 is currently utilised for the grazing of horses.

Lot 6 was chosen to store materials during some after-hours road works which did not allow the use of normal facilities as works occurred outside opening hours. As the site was covered in asphalt, the convenience of hard surfaces for the storage of materials and an all-weather site for traversing the large trucks proved ideal for this use. Irrespectively, the storage of materials was inconsistent with the approvals over the land and the materials were removed in January and February, 2013.

Along with the screening room, it is assumed an amenities building was situated on Lot 6. One building is seen in historical aerials and it theorized that this building contained amenities as well as a canteen and/or food preparation area. No plans were available to provide guidance to a building layout. A concrete in-ground tank was located on the site during site investigations for this assessment. Given the age of the Drive-in Theatre, it is suspected that the tank is a septic tank as it is thought connection to town sewage would not have been available. No site plans are available to provide certainty on the septic tank nor the location of any disposal area(s).

Dingo Demolitions was engaged by Council in to remove the building to slab level. This was undertaken in February 2013. Mr Stephen Patterson confirms there was Asbestos in the building and it was removed as per the guidelines. Further, an Asbestos Clearance report was completed by About Asbestos and is included in Appendix C.

Plates 1 - 6 illustrate the condition of the site in general.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC



Figure 4. 1987 Historical aerial photograph of site showing Drive-in Theatre (screening room/amenities building and shed) on Lot 6 and some cropping on Lot 5.

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9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC



Figure 5. 2007 Historical aerial photograph of site showing lack of cropping (Lot 5) and disused Drive-in Theatre.

9.4 LEP Amendment Request - Rifle Range Road and Plateau Drive.DOC



Figure 6. 2011 Historical aerial photograph of site showing disturbance to site due to use as works compound for construction of Plateau Drive.



Plate 1: North-west view across Lot 5, showing general grazing land.



Plate 2: Easterly view of mound (fill) located at the northern end of Lot 6



Plate 3: General view of disused Drive-in Theatre



Plate 4: Remnants of screen room/amenities building (possible septic tank in-situ)



Plate 5: General view along western boundary showing build-up of sediments.



Plate 6: General view of asphalt area showing oil staining from vehicles

2.4 Inventory of Known Chemicals and Wastes and their Location

An inventory of chemicals and/or wastes (prior to recent uses by Council) stored at the site was not available. It is assumed, some general chemical use for building maintenance and landscaping purposes (e.g. weed control) has occurred at the site and within the investigation area over time, especially in association with the cropping uses.

As previously mentioned, Council utilised Lot 6 for the storage of a range of materials from approximately 2011 to early 2013. Appendix B contains a full listing of materials stored on the site.

2.5 Possible Contaminant Sources

Despite the lack of recent use of chemicals at the site, historical use may be possible at the site. Table 1 lists the sources of potential contamination at the site and their associated contaminants of concern.

Table 1: Potential Contaminants of Concern for Identified Activities

Identified Contaminant Source	Potential Contaminants	Targeted Contaminants
Commercial and Agricultural Activities		
Drive-in Theatre	Hazardous Building Materials (Lead, Asbestos) Fertiliser (Calcium phosphate, Calcium Sulfate, nitrates, ammonium sulfate, carbonates, potassium, copper, magnesium, molybdenum, boron, cadmium) Fungicides (carbarnates, copper sulfate, copper chloride, sulfur, chromium, zinc) Herbicides (Ammonium Thiocyanate, carbarnates, organochlorines, organophosphates, arsenic, mercury, triazines) Pesticides (Arsenic, lead, organochlorines, organophosphates, sodium tetraborate, carbarnates, sulfur, synthetic pyrethroids)	Metals (Silver, Arsenic, Lead, Cadmium, Copper, Nickel, Selenium, Zinc, Mercury, Iron and aluminium)
Building Demolition		
Site Maintenance		
Cropping		Hazardous Building Materials (Asbestos)
Animal Husbandry		Pesticides (a-BHC, Hexachlorobenzene, b-BHC, g-BHC (Lindane), d-BHC, Heptachlor, Aldrin, Heptachlor epoxide, transchlordane, Endosulfan I, cischlordane, Dieldrin, 4,4-DDE, Endrin, Endosulfan II, 4,4-DDD, Endosulfan sulfate, 4,4-DDT, Methoxychlor. For specific chemicals related to dipsite, refer Section 2.8.3.)
Storage of various materials		
Site clean-up activities		Petrochemicals (TPH)

2.6 Historic Use of Adjacent Land

Historically, the general location has been dominated by residential dwellings to the south and rural land uses to the east, north and west. Immediately to the east, a residential estate has recently been completed.

2.7 Local Usage of Ground/Surface Waters

A search of existing licensed groundwater bores within 250 m of the investigation areas was conducted using the NSW Natural Resource Atlas (NRATLAS 2013) website. There is one groundwater bore within 250m of the Study Area. Bore GW053230 is located approximately 200m south-east of the site and Study Area. This bore is licensed for domestic and irrigation (horticulture) purposes. This bore was constructed in 1981, has a final depth of 16.2m and has three water bearing zones (1-1.5m, 8-8.5m and 11m). Given the distance to this bore, soils and topography of the locality it is considered unlikely even if contamination were to occur on the site these contaminants would migrate to this bore.

2.8 State and Local Authority Records

2.8.1 Contaminated Land Records

A search of the Contaminated Land Record (EPA 2013a) for the Ballina Shire Local Government Area (LGA) did not identify any site notices relating to the site or adjoining the site.

2.8.2 Protection of the Environment Operations Act Licenses

A search of the current list (EPA, 2013b) of licensed activities as per Schedule 1 of the Protection of the Environment Operations Act 1997 did not identify any licensed polluting activities occurring within or adjacent to the site.

2.8.3 Cattle Tick Dip Sites

A search of the NSW Department of Primary Industry (DPI) Cattle Dip Site Locator tool (<http://www.dpi.nsw.gov.au/agriculture/livestock/health/specific/cattle/ticks/cattle-dip-site-locator>) indicated that there are two Cattle Tick Dip Sites in the locality, both approximately 1 km from the study area. These are: BEWERS HILL which is located approximately 1km south-east and SNEATHS is located approximately 1km north-west. Both lie well outside the 200m investigation buffer.

3. Site Inspection and Condition

3.1 Topography

Lot 6 is generally flat to gently sloping with a southerly aspect. Lot 5 consists of a steeper area and knoll. Generally Lot 5 has a southerly aspect. The study area is located on a ridgetop with elevation ranging from approximately 140m to 170m AHD.

3.2 Visible Signs of Contamination

The investigation area was investigated on foot in order to identify any signs of contamination. For Lot 5, in general, no obvious signs of contamination (such as plant stress, surface spills, imported fill, odours etc.) were evident during the site investigation. The exception was a stockpile of soil located in the southern section of Lot 5 (within Study Area). The soil within this stockpile appeared to be good quality top soils and it is surmised this was obtained from the surface soils of Lot 5 impacted by the construction of Plateau Drive.

In regard to Lot 6, numerous sign of potential contamination were observed. Debris from the old building along with debris most likely from the range of materials stored on the site were located across the majority of the Site still covered in asphalt. As previously mentioned, an in-ground concrete tank is located on the site (Plate 4). In addition, stockpile(s) of soil are located in the northern section of the allotment (Plate 2). It is surmised some of the soil is original soil from the allotment but some is imported fill/soil materials that were sourced from nearby construction projects by Council (Paul Witchard, Ballina Council, pers. comm.). This material was kept on-site as it was sourced (in general) from virgin excavations and as such is considered unlikely to be contaminated. Such material is considered a resource and has potential to be used either on-site or used elsewhere for filling activities. Some gravel materials was observed in the material and is most likely a result of some inadvertent mixing with road base materials once stored on the site. Any gravel material is not seen as potentially contaminating as its original source would have been from a licensed quarry in the locality.

In addition to above, the asphalt surface was generally intact (Plate 3). Staining of the asphalt from oils were observed in numerous locations (e.g. Plate 6). The surface of the asphalt is not flat as the site has been modified for the Drive-in Theatre use. As such the site is mounded regularly to allow correct positioning of vehicles for occupants to view movies. This modified landform allows for drainage lines along the rows. These all drain towards the west whereby sedimentation was observed (Plate 5). This area is bunded to collect sediments from leaving the site.

The materials observed across the site are in general considered inert and unlikely to cause contamination. Contaminants of Concern are from the former building on the site (Asbestos and Lead) and Petrochemicals from oil/fuel leaks from vehicles parked during movie sessions and vehicles used to transport materials recently stored and removed from the site.

A visual inspection of adjacent land from the subject land indicated that there were no clearly visible signs of contamination adjoining the Study Area.

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3.3 Flooding Potential

The investigation area is not mapped as flood liable.

3.4 Locally Sensitive Environments

There are no sensitive environments within the bounds of the subject site nor adjacent to.

3.5 Local Geology and Soil Description

Morand (1994) describes the majority of the site's geology as Lamington Volcanics: Lismore Basalts – Tertiary basalts with bole and minor agglomerate. The geology of a small section in the western section of Lot 5 is described as Neranleigh-Fernvale Group or previously known as the Fitzroy Beds.

The majority of the Study Area is mapped by Morand (1994) as the residual soil landscape unit being Wollongbar (wo). These are described by Morand (1994) as:

Wollongbar (wo):

Landscape – very low to low gently undulating to rolling rises and hills on plateau surfaces of the Lismore basalts. Slopes 3 – 15% and relief generally 30 – 60m. Altitude 140 – 200m. Extensively cleared closed-forest ("Big Scrub").

Soils – Mostly deep (>200cm), well-drained Krasnozems (Gn3.11, Gn4.11, Uf5.22) with shallower (80 – 150cm), stonier Krasnozems (Gn3.11, Gn4.11, Uf5.22) on crest/upper slope boundaries. Wet alluvial Krasnozems (Uf5, Uf6) in drainage lines.

Limitations – highly acid, moderately erodible soils with high aluminium toxicity potential and low available water-holding capacity. Localised mass movement hazard and diminishing arable land.

A small section within the western section of Lot 5 is identified by Morand (1994) as having the erosional soil landscape unit Billinudgel (bi). The bi soil landscape is described by Morand (1994) as:

Landscape – low rolling hills on metamorphics of the Neranleigh-Fernvale Group. Relief is 50-100m, slopes 10-20% and locally >33%. Slopes are generally moderately long (100-300m). Ridges and crests are narrow (100-150m). Partly cleared open eucalypt forest. Littoral closed-forest at Brunswick and Broken Heads.

Soils – shallow to moderately deep (100cm), moderately well-drained Yellow Podzolic Soils and Yellow Podzolic Soil/Soloth intergrades (Dy 5.21, Dy3.11, Dy4.11) on crests and slopes. Deep (>100cm), moderately well-drained Yellow Podzolic Soils (Dy5.21, Dy4.11) and Red Podzolic Soil/Red Earths (Dr 5.21) on siltstone.

Limitations – hardsetting, shallow, stony and erodible soils of low fertility. Steep slopes and localised mass movement.

3.6 Location and Extent of Imported and Locally Derived Fill

The Study Area, in general, does not appear to have been filled. Lot 5 was heavily disturbed during 2011 for the construction of Plateau Drive as this dissected the allotment. Some fill may have been utilised on site during this process but is considered to be minimal and limited to the southern

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section of the Study area on this allotment. A stockpile of soil was located in this area (south of horse paddock) and is discussed above.

Lot 6 was highly modified for the Drive-in Theatre use. Some fill may have been imported for this land reformation. However, it is considered this is unlikely and that rather the soils were sourced from the site by way of excavation sections to allow the required mounding. This would have been the most economic form of reshaping the site. In recent years, Council has stored fill at the site and this is described above.

3.7 Location of Bore Hole Tests

All soil samples were taken from surface samples, thus no boreholes were constructed for this investigation.

3.8 Depth to Groundwater Table

Depth to groundwater was not investigated, however, it is anticipated to be relatively deep given the location of the site along a ridgeline.

3.9 Local Meteorology

The average annual rainfall recorded at the Ballina Airport Automated Weather Station is 1782.0 mm, with the highest volume of rainfall (>120mm) falling in November through to June. The driest months are July to October. The average maximum temperature is 28.2°C (in summer) and the average minimum temperature is 8.6°C (in winter).

4. Sampling and Analysis Plan and Sampling Methodology

4.1 Sampling, Analysis and Data Quality Objective (DQOs)

The objective of this preliminary investigation is to gather information with regard to the type, location, concentration and distribution of contaminants to determine if the subject site represents a risk of harm to end users and sensitive receptors. To determine this, soil sampling and laboratory analysis has been conducted upon surface soils collected from the Study Area.

4.2 Rationale

The Study Area consists of approximately 6.5ha. Under the NSW EPA Guidelines (1995) a total of approximately 72 samples would be required across the site. However, the history of the site is comprehensive by way of historical aerials and the provision of recent activities by Council. In addition, a previous investigation (part of Lot 5) was recently completed whereby no signs of contamination were found. The historical activities of grazing, cropping and the Drive-in Theatre does not elude to issues in regard to contamination. The recent activities is of higher concern. As such, a variation from the guidelines was undertaken by way of a reduction in the samples collected for analysis. It is considered the information gained from this level of investigation would identify if past uses resulted in contamination and would trigger the requirement for further investigations.

In general a systematic sampling protocol was used across Lot 5. As a result, eight (8) samples were taken across the site (Figure 7). SP1 to SP7 were collected in a systematic pattern across the

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(current) horse paddock) while SP8 was collected from stockpiled soils located in the southern section of the allotment.

For Lot 6, a targeted sampling pattern was undertaken as follows:

- SP9 to SP13 were collected within the northern section of the site where stockpiles of soils were observed;
- SP14 and SP15 were collected in close proximity to the estimated position of the now removed building;
- SP16 was collected from a 'drain' cut through the asphalt. This sample is most likely from original soils of the site but may be from subsoils due to the excavation through the mound in the area;
- SP17 to SP19 were collected from sediments that had collected along the western boundary (atop asphalt) as this would allow for the identification of contamination on the site as all surface waters drain to this area;
- SP20 was collected in the south-west section of the site in the location where the screen would have been located. This area has been man-made but soils are likely to be originally from the site but may be subsoils;
- TPH1 was collected in the same location as SP18 for the reasons outlined above;
- TPH2 was collected from sediments within the drain immediately downslope from a oil stain on the asphalt; and
- Asb1 was collected from soils in the location of the now removed building for confirmation purposes.

A total of 20 surface soil samples were collected and were composited into five (5) samples for analysis. Figure 7 indicates the location of each individual sample point.

Composite samples were analysed for a full range of heavy metals and organochlorine (OC) pesticides (including Aldrin, Cis-chlordane, Trans-chlordane, HCB, DDD, DDE, DDT, Alpha-BHC, Beta-BHC, Delta-BHC, Lindane, Dieldrin, Endrin, Heptachlor, Heptachlor epoxide, Alpha-endosulfan, Beta-endosulfan, Endosulfan sulfate, Methoxychlor).

A further two (2) samples were collected and analysed for Total Petroleum Hydrocarbons (TPH). Given oil staining was apparent on the asphalt, analysis of TPH would indicate if such events were regular and contaminants were being carried into drainage lines across the site.

One (1) sample was collected for Asbestos characterisation.

Organophosphate (OP) pesticides were not analysed as the site history did not identify any likelihood of these pesticides occurring and no elevated levels of OC or arsenic were identified at the site (samples are stored for OP analysis if required). The bacterial decomposition of OP pesticide is very rapid and the occurrence of elevated levels of OP's in the environment is rare (i.e. based on over 1000 soils analysed in soils of Northern NSW by EAL).

Polychlorinated Biphenyls (PCBs) were not analysed, as a source of contamination was not identified (i.e. PCB sources identified from electrical supply industry or mining). Poly-Aromatic Hydrocarbons (PAH) and BTEX were also not analysed on the soils as these organic analytes are only typically analysed for service station sites, or at sites with above or under-ground onsite hydrocarbon storage.

4.3 Sampling Methodology

Surface samples (0 – 200mm depth) were collected using a stainless steel spade, with soil being placed in snap lock plastic sample bags. For samples taken from sediments atop the asphalt, soil was scrapped from the surface as best possible until an appropriately sized sample was collected. The sampling procedure utilised in this investigation was in accordance with AS 4482.1 – 2005.

All soil samples were placed into an esky with ice bricks, and delivered to the Environmental Analysis Laboratory at Southern Cross University, Lismore. Metals analysis was conducted by EAL and quality control included blanks, duplicates and traceable certified NIST (National Institute of Standards Technology) reference soil in every sample batch. Analysis is conducted using a Perkin Elmer ELANDRC-e ICPMS (Inductively Coupled Plasma Mass Spectrometry). Chain of custody forms, laboratory quality assurance and laboratory quality control documentation are available on request. The analysis of pesticides was subcontracted to the NATA-registered Labmark laboratory (refer to Appendix A for subcontracted results with all QA/QC results).

Samples were composited in accordance with NEHF (1998) and was performed by EAL in accordance with the standard volumetric mixing procedure.



Figure 7. Soil Sampling Plan

5. Basis for Assessment Criteria

The acceptable limits of the parameters tested are based on the NSW DEC (2006) Contaminated Sites - Guidelines for the NSW Site Auditor Scheme (2nd Edition)(2006) and the new NEPM (2013) guidelines. In particular Column 1 of Table 'Soil Investigation Levels for Urban Redevelopment Sites in NSW'. Column 1 represents Human - Based Investigation Levels (HBIL) for developments being 'Residential with gardens and accessible soil including children's daycare centres, preschools, primary schools, town houses or villas'. The investigation levels adopted for this investigation are presented below in Table 2.

Table 2: Soil investigation levels for urban redevelopment sites in NSW: Column 1 'Residential with gardens and accessible soil including children's daycare centres, preschools, primary schools, town houses or villas' (NSW DEC 2006).

Contaminant	Acceptable Limit Column 1 (mg/kg) (2006)	Acceptable Limit Column 1 (mg/kg) (2013)
Arsenic	100	100
Cadmium	20	20
Chromium (VI)	100	100
Copper	1,000	6,000
Lead	300	300
Manganese	1,500	3,800
Nickel	600	430
Zinc	7,000	7,400
Mercury	15	40
OC's (aldrin and dieldrin)	10	6
OC's (DDT, DDD, DDE)	200	240
TPH (C6-C10) ¹		700/800
TPH (> C10-C16) ¹		1,000/1,000
TPH (>C16-C34) ¹		2,500/3,500
TPH (>C34-C40) ¹		10,000/10,000

¹ Defined as 'Management Limits' in NEPM 2013 with course/fine limits based on soil types

5.1 Background Levels

Metals occur naturally within soils and are a natural constituent of geological materials that erode and assist in the formation of soils. The background levels of metals analysed, obtained from ANZECC and NHMRC (1992) Table 4 'Environmental Soil Quality Guidelines', are presented below in Table 3.

Table 3: Background ranges for potential contaminants.

Contaminant	Background Range (mg/kg)
Arsenic	0.2 – 30
Cadmium	0.04 - 2
Chromium (VI)	0.5 – 110 (possible underestimate)
Copper	1 - 190
Lead	<2 – 200
Manganese	4 – 12,600
Nickel	2 - 400
Zinc	2 - 180
Mercury	0.001 - 0.1

5. Results

The results from the laboratory soil testing regime and comparison to the guideline limits is provided below in Tables 4 to 6. The soil sampling numbers correlate with the soil sampling locations as shown on Figure 7.

The full suite of heavy metals tested are provided below. For organochlorine pesticides, twenty (20) chemical constituents of these organochlorine pesticides were tested for. A summary of these results are provided below with the laboratory certificate provided in Appendix A.

All metals, hydrocarbons and pesticides were found to be either at or below expected background ranges or below assessment criteria. The cement fibre fragment analysed returned a negative result for Chrysotile Asbestos.

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Table 4: Composite Sampling Results.

Contaminant	Sample C1 (SP1 - 4)	Sample C2 (SP5 - 8)	Sample C3 (SP9 - 12)	Sample C4 (SP13 - 16)	Sample C4 (SP17 - 20)	Adjusted Acceptable Limit (2013)	Background Range (mg/kg)
Silver (mg/kg)	<1	<1	<1	<1	<1	na	na
Arsenic (mg/kg)	8	5	4	4	6	25	0.2 – 30
Lead (mg/kg)	16	14	8	18	25	75	<2 – 200
Cadmium (mg/kg)	<0.5	<0.5	<0.5	<0.5	<0.5	5	0.04 - 2
Chromium (mg/kg)	69	65	69	70	33	25	0.5 – 110 (possible underestimate)
Copper (mg/kg)	36	41	28	17	32	1500	<2 – 190
Manganese (mg/kg)	698	946	501	706	970	950	4 – 12,600
Nickel (mg/kg)	10	11	22	10	14	107.5	2 - 400
Selenium (mg/kg)	<2	<2	3	<2	2	50	na
Zinc (mg/kg)	91	129	97	78	151	1850	2 - 180
Mercury (mg/kg)	0.13	0.11	0.09	0.10	0.10	10	0.001 - 0.1
Iron (%DW)	13.70	13.70	14.20	14.30	9.78	na	na
Aluminium (%DW)	6.21	5.90	6.80	6.59	4.48	na	na
DDT (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	60	<0.2
Aldrin + Dieldrin (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	1.5	<0.2
Chlordane (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	12.5	<0.2
Endosulfan (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	67.5	<0.2

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Contaminant	Sample C1 (SP1 - 4)	Sample C2 (SP5 - 8)	Sample C3 (SP9 - 12)	Sample C4 (SP13 -16)	Sample C4 (SP17 -20)	Adjusted Acceptable Limit (2013)	Background Range (mg/kg)
Endrin (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	2.5	<0.2
Heptachlor (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	1.5	<0.2
HCB (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	2.5	<0.2
Methoxychlor (mg/kg)	<0.1	<0.1	<0.1	<0.1	<0.1	75	<0.2
Other Organochlorine Pesticides (mg/Kg)	<0.1	<0.1	<0.1	<0.1	<0.1	<2.5	<0.2

Table 5: Individual Results - Total Petroleum Hydrocarbons.

Contaminant	Sample (TPH1) (mg/kg)	Sample (TPH2) (mg/kg)	Adjusted Acceptable Limit
C10- C14 Fraction	<50	<50	na
C15- C28 Fraction	380	860	na
C29- C36 Fraction	380	660	na
>C10-C16 Fraction (mg/Kg)	<50	51	1,000
>C16-C34 Fraction (mg/Kg)	650	1,300	2,500 ¹
>C34-C40 Fraction (mg/Kg)	320	560	10,500

¹Soil is considered 'fine', however, acceptable limit for 'course' utilised as provides a lower and subsequently greater surety for future land uses.

Table 6: Fibre Cement Sampling Results.

Contaminant	Description	Asbestos Identification
ASB1	The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of cement	No asbestos detected

6. Discussion and Conclusion

A Preliminary Contamination Site Assessment for the proposed subdivision of the site was warranted to ensure past land uses have not resulted in contamination of the area.

The site history for Lot 5 did not indicate heavy use of any pesticides or chemicals within the current Investigation Area other than some cropping in the late 1980's. Prior investigations across this allotment (Melaleuca Group, August 2013) did not indicate past uses resulted in contamination of the land. The results from this investigation (Composite samples 1 and 2) are similar to that recorded earlier and as such confirm that past uses have not resulted in contamination.

The site history for Lot 6 also did not indicate heavy use of any pesticides or chemicals prior to the Drive-in Theatre use. Vehicles parked for screening of movies may have leaked oils and/or fuels but as the site was covered in asphalt any such wastes would have been retained on the asphalt surface. Heavy rainfall events may have resulted in washing off of these compounds, however, hydrocarbons readily degrade in the environment (e.g. evaporation, UV decomposition, microbial action). As the Drive-in Theatre has been disused for several years, oils and/or fuels are most likely to have degraded. The type of vehicles that once frequented the site are most likely to have been fuelled by Leaded-fuel. As such elevated levels of Lead may provide an indication of issues with vehicles. The Lead results (Composite samples 3 - 5) are not elevated in comparison to that found in samples from Lot 5 (Composite samples 1-2) nor from that previously investigated (Melaleuca Group, August 2013)

The presence of TPHs on the site are most likely from recent uses of the site which involved the storage of various materials. The use of large vehicles and heavy machinery for this purpose are the most likely source of the petrochemicals. The results recorded in the TPH samples provide an indication of the rapid degradation of these compounds. The results in TPH2 are from a sample approximately 1.5m from the observed oil stain. Whereas the results in TPH1 are from sediments washed across the site and collected along the drainage lines and thereby undergoing a washing, transportation and mixing process. These actions would all increase the rate of degradation of these compounds. While some dilution of concentrations could also explain the variance, it is hypothesised much higher levels would need to have been recorded from TPH2.

Results were compared to Column 1 acceptable limits which provides lower investigation levels (suitable for residential land uses) and hence provides a more sensitive comparison of results which may identify any contamination issues on the site and provides guidance to possible future landuses at the site.

Overall the metal concentrations in the soils of the Study Area were generally within expected background levels and below Column 1 HBIL.

The results show elevated levels of Chromium and Manganese. The metals Manganese and Chromium are typically found in significant background concentrations in the volcanic basalt derived soils in this region (refer Table 3). The elevated levels of Manganese and Chromium are considered indicative of naturally occurring levels in the local soils (Lancaster, 2006). The NSW EPA 1995 guidelines allows the option of removing background concentrations from site assessment levels hence in many cases reducing potentially elevated levels to negligible levels of no concern. Thereby,

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the elevated levels of Chromium and Manganese found at the site are considered due to background levels within natural soils.

Some border-line upper background levels of Mercury were also observed across the Study Area. However, levels recorded are well below the assessment criteria of both the new NEPM (10mg/kg) and previous criteria level (3.75mg/kg).

All other metal concentrations in the soils are within expected background levels. No pesticides were present above analytical detection limits in the samples analysed.

No Asbestos was detected on the site.

No testing underneath the asphalt was undertaken as the site history did not indicate a potential risk of contaminants of concern. Site activities of concern are that of recent years and the clean-up activities undertaken appear to have removed any potential contamination issues. Soils/fill retained on the site from various activities undertaken by Council do not appear to be contaminated (refer results on Composite sample 3).

To allow for residential subdivision, Lot 6 will require the removal of the asphalt and the entire allotment will need reformation into level building areas. Removal practices should ensure the asphalt and soils immediately underneath (e.g. maximum 100mm) to be removed systematically to ensure all remaining debris and or minor contamination issues (e.g. very localised spot contamination from oils/fuels) to be removed. This will inherently remove any possible contamination issue that was not identified during this investigation. In addition, the in-ground concrete tank requires removal. The tank needs to be inspected to determine the contents and appropriate pumping out undertaken (if necessary). Careful removal is to occur by way of not only removing the concrete but also soils immediately surrounding the tank (approximate 100mm of soils on all sides and on base). After removal, the excavation should be inspected for any signs of discolouration and if found, affected soils are to be removed. All wastes are to be removed to a licensed landfill facility.

While not deemed required, Council may chose to undertake further targeted and/or systematic sampling across Lot 6. It is advised this would be undertaken only after all land reformation works are completed (with the exception of possible samples collected from the base of the tank excavation). The aim of such a sampling effort is to provide confirmation of the clean-up works and as such only a small number (i.e. less than guidelines) is anticipated as being required to meet these needs.

In summary, it is therefore considered that the Investigation Area does not represent a significant risk of harm to end users of the proposed change in use and subdivision for residential purposes. Some clean-up works (removal of concrete tank and asphalt) are required on Lot 6. However, these works would provide additional surety that the site is suitable for residential purposes.

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7. References

- Australian and New Zealand Environment and Conservation Council (ANZECC) and National Health and Medical Research Council (1992). Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites. Australian and New Zealand Environment and Conservation Council, National Health and Medical Research Council, 57p.
- Commonwealth Bureau of Meteorology (2013). Averages for Major Cities and Towns [Online], Available: <http://www.bom.gov.au/climate/data/>
- Council of Standards Australia (2005). AS 4482.1-2005 Guide to the sampling and investigation of potentially contaminated soil – Non-volatile and semi-volatile compounds. Council of Standards Australia, 50p.
- Department of Urban Affairs and Planning and the Environment Protection Authority (1998). Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land.
- DIPMAC (1995) Cattle Tick Dip Site Management Committee. Guidelines for the Assessment and Clean-up of Cattle Tick Dip Sites for Residential Purposes. NSW Agriculture, Wollongbar.
- DPI (2004) NSW Coastal Quaternary Geology Data.
- Enhealth Council (2001). Health Based Soil Investigation Levels. Commonwealth of Australia. 27pp.
- EPA (2013a) New South Wales Government, Department of Climate Change. Contaminated land record [Online], Available: <http://www.environment.nsw.gov.au/clmapp/searchregister.aspx>
- EPA (2013b) New South Wales Government, Department of Climate Change. List of Licences [Online], Available: <http://www.environment.nsw.gov.au/prpoeo/licences.htm>
- Ballina Shire Council (2012). Draft Local Environmental Plan
- Lancaster, GJ (2006) - Assessment of Total Soil Manganese and Chromium in Basaltic Soils of the North Coast, NSW. *Unpublished Report, EAL, SCU, Lismore, NSW.*
- National Environmental Health Forum (NEHF) 1998. Soil Series No. 3 - Composite Sampling. Department of Human Services, Canberra ACT, Aust.
- NEPC (1999). Schedule B (1) Guidelines on the Investigation Levels for Soil and Groundwater. National Environmental Protection, Assessment of Site Contamination.
- NEPC (2013). Schedule B7 Guideline on Health-Based Investigation Levels
- Northern Rivers Regional Council (NRRC) (2007). Regional Policy for the Management of Contaminated Land.
- NSW DEC (2006). Contaminated Sites – Guidelines for the NSW Site Auditor Scheme. NSW DEC, Sydney South, 85p.
- NSW EPA (1994). Contaminated Sites –Guidelines for assessing Service Station Sites. NSW EPA, Chatswood, 35p.

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NSW EPA (1995). Contaminated Sites – Sampling Design Guidelines. NSW EPA, Chatswood, 35p.

NSW EPA (2011). Guidelines for Consultants Reporting Contaminated Sites. NSW EPA, Chatswood, 22p.

NSW Natural Resource Atlas (NRATLAS). 2013. <http://nratlas.nsw.gov.au>

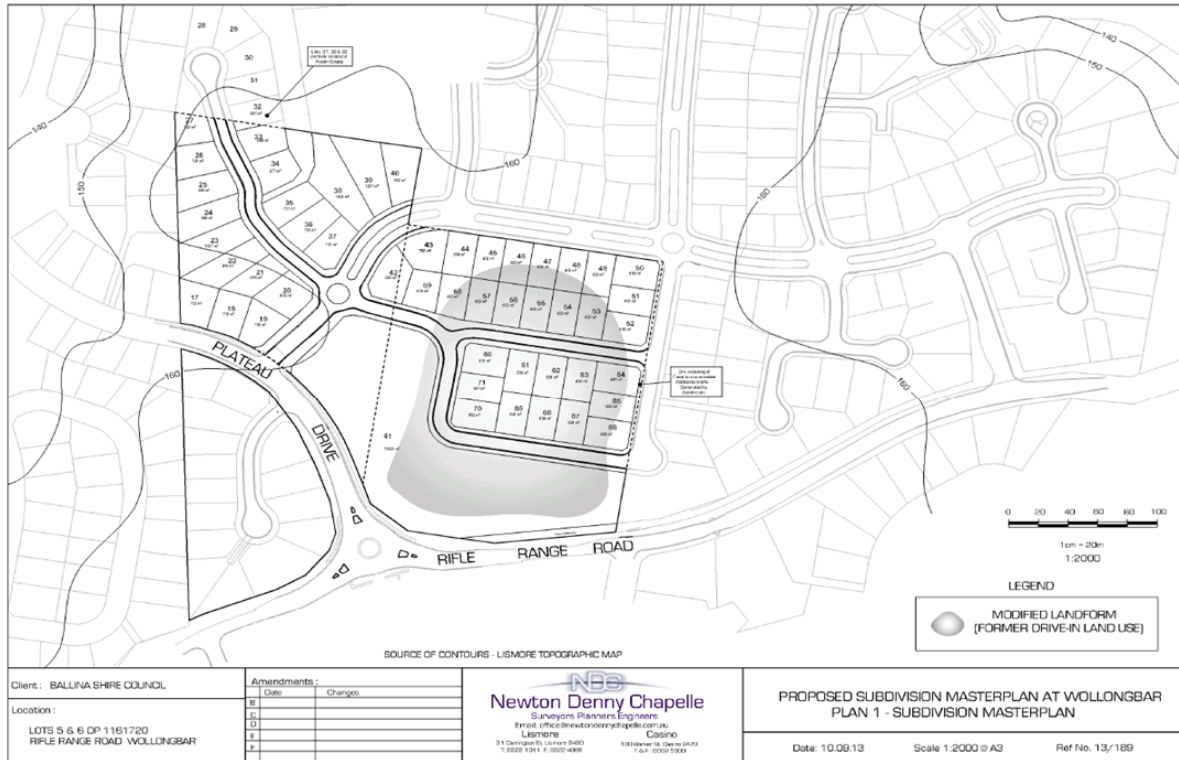
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Appendix 4 – Subdivision Master Plan for Lots 5 and 6



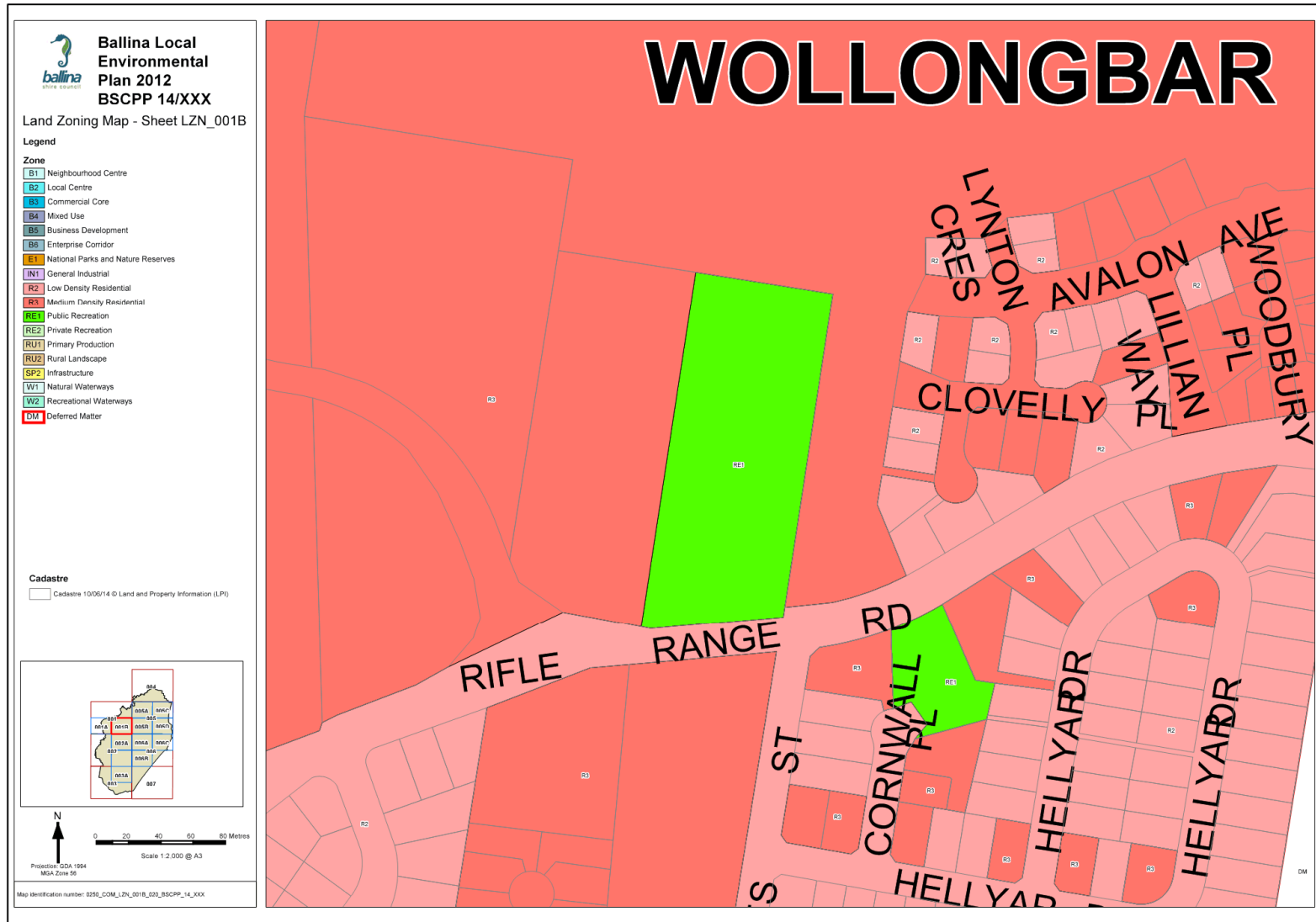
Appendix 5 – Report to Council 26 June 2014

Appendix 6 – Wollongbar Sporting Fields Masterplan



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Wollongbar Sports Field Site - Extract from undetermined s96 Plan showing proposed sporting facilities.

