clarence
VALLEY COUNCIL

1 August 2011

PGF001013

Reference: James Creek, Kahuna PP
Contact: David Morrison

The Regional Manager
Department Planning & Infrastructure
Locked Bag 9022
GRAFTON NSW 2460

Dear Steve

Planning Proposal for Lot 104 DP 751388, James Creek Road, James Creek

Council, at its Meeting held on 19 July 2011, resolved to support a planning proposal over the above mentioned land and to refer it to the Planning Gateway. At that same Meeting, Council considered the draft Maclean Urban Catchment Local Growth Management Strategy (the LGMS) following its exhibition for public comment.

In regard to the LGMS, Council resolved to adopt that Strategy, subject to some changes. The LGMS as adopted by Council supports this Planning Proposal. The changes endorsed by Council principally involve the addition of the area at James Creek as applied for in this planning proposal application for future residential development. I must advise however, that a rescission motion (copy attached) was lodged on 21 July, effectively to include additional land at James Creek. The effect of that rescission motion is that Council's resolution of 19 July to adopt the LGMS has no effect at this time until the rescission motion is considered. This is anticipated to occur at Council's next scheduled Meeting to be held on 16 August 2011. I shall advise you of the outcome of that as soon as possible.

I have attached copies of Council's resolutions on both the Planning Proposal and the LGMS. Also attached is a copy of the Planning Proposal application, and an electronic copy can be forwarded if required.

You will note that Council's resolution to support the planning proposal requires further discussion in regard to service provision. Council will negotiate with the relevant property owners in relation to that matter following a positive response from the Planning Gateway to enable public exhibition to proceed.

If you require further information please contact me on telephone 0266 430 204.

Yours faithfully

David Morrison.

David Morrison
Manager Strategic & Economic Planning

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Committee:	**ENVIRONMENT, ECONOMIC & COMMUNITY**
Section:	Strategic & Economic Planning
Date:	12 July 2011
Item: 12.112/11	**REQUEST FOR A PLANNING PROPOSAL – LOT 104, DP 751388, JAMES CREEK ROAD, JAMES CREEK**

ATTACHMENT

REPORT SUMMARY

Applicant	Harrison Shepherd Pty Ltd
Owner	Kahuna No.1 Pty Ltd
Subject Land	Lot 104 DP 751388
Current Zoning	Maclean LEP 2001 : 1(a) Rural (Agricultural Protection)
Proposed Zoning (under exhibited Draft CVLEP 2010)	RU1 – Primary Production
Proposal	Rezone to : R1 General Residential R3 Medium Density Residential B1 Neighbourhood Centre

Council is in receipt of an application to support a planning proposal (i.e. rezoning application) over land at James Creek, for the purposes of residential subdivision including a neighbourhood business centre. The land is within the James Creek growth area as included in the North Coast Regional Strategy and hence, its appropriateness generally for residential development has been addressed by the draft Maclean Urban Catchment Local Growth Management Strategy (the LGMS). The LGMS is reported separately to this Council meeting – a decision on this specific planning proposal application should be consistent with whatever Council decides on the LGMS.

While there are a number of detailed planning matters that require further assessment, the fundamental issue raised by this application and addressed by the LGMS is whether the two growth areas of James Creek and Gulmarrad should be rezoned at the same time and allowed to development concurrently, or whether they should be sequenced. Issues such as the overall demand and the financing of required infrastructure are central to this assessment.

The LGMS, in taking these matters into account, takes the position that there is insufficient demand for both areas to proceed in the short term. Consequently, it recommends that Gulmarrad proceed initially with the need for James Creek to be reassessed in a five year review of the LGMS. On that basis, it is recommended that Council not support the planning proposal at this stage.

OFFICER'S RECOMMENDATION

That Council not support the preparation of a planning proposal over Lot 104 DP 751388, James Creek Road, James Creek, on the basis that it is not supported by a local growth management strategy but review that position in conjunction with the strategy in five years.

RECOMMENDATION BY COMMITTEE

Tiley/Williamson

That

The matter be deferred for consideration at the Ordinary Council Meeting on 19 July 2011.
Voting recorded as follows:
For: Howe, Hughes, Tiley, Williamson
Against: Nil

COUNCIL RESOLUTION – 12.112/11
(Crs Tiley/Hughes)

That Council support the preparation of a planning proposal over Lot 104 DP 751388, James Creek Road, James Creek.

Voting recorded as follows:
For: Councillors Williamson, Comben, Dinham, Howe, Hughes, McKenna, Simmons, Tiley and Toms
Against: Nil

BACKGROUND

The Mid North Coast Regional Strategy was adopted by the State Government in 2009. It identified a number of "growth areas", being areas that may be suitable to accommodate future growth subject to a more detailed planning assessment through a local growth management strategy. Two of these included Gulmarrad and James Creek. Council undertook to prepare a local growth management strategy for the Maclean catchment (the LGMS), including Gulmarrad and James Creek, during 2010. It was exhibited over December 2010 to February 2011. A report considering comments on it and seeking its adoption is considered separately at this Council meeting. The LGMS will form the basis for decision making within the area and hence should provide direction on Council's decision on this specific planning proposal.

The merits of James Creek as a development area, including this specific site, are addressed in detail by the LGMS. Should Council support a LGMS that endorses James Creek, the next step is to refer the planning proposal to the Planning Gateway requesting permission for exhibition. That process will also determine the Gateway's further agency consultation and detailed assessment requirements.

A specific planning proposal application was submitted on 31 May 2011 for a significant site within the James Creek growth area (see attachment A). Included with it are assessments of sewerage feasibility, flora and fauna including SEPP44 – Koalas, Aboriginal cultural heritage and contaminated land. Other issues are addressed more broadly within the planning proposal. Additional assessment of traffic impact is likely to be necessary should Council support the application. This application encompasses about 200 conventional residential lots and about 5 hectares of medium density development – total in the order of 300 dwellings, plus a neighbourhood business site. Whilst not part of the formal planning proposal application, it also identified conceptually a potential for about another 270 dwellings on surrounding land within the growth area, thereby identifying a total potential for about 500-600 dwellings. This of course is conceptual only and would be subject to more detailed assessment of constraints.

ISSUES

While further assessment of constraints and agency consultation is required, the fundamental issue of need is addressed in detail by the LGMS and the separate report on it to this Meeting. Reference should be made to that report in detail, however, the relevant discussion is reproduced below.

"6. Gulmarrad, James Creek or Both
Submissions from land owners within the James Creek area suggest that this area is suitable for residential development and should be identified as such by the LGMS (refer submissions 2.1, 3.1, 16.1, 18.1, 18.2). Discussion on demand (Issue 4 above) is central to this matter. It is open to Council take to a market based approach to land release and let the market determine which area and the rate at which they develop. This approach would be based on the developers in the respective areas meeting the full cost of required service augmentations (discussed later at Issue 7). The relative merits of allowing both areas to proceed is problematic and requires some conjecture.

The advantages of allowing both areas to develop may include:
- *Increased competition and choice, leading to lower housing prices and reduction in the risk of a single developer controlling the local market.*
- *An ability to attract additional demand not being met elsewhere or from outside the catchment, particularly from Yamba given infrastructure constraints there.*
- *Allied to the above, increased local economic development.*
- *Key infrastructure costs at the sewerage treatment plant can be shared. As this is a significant upfront cost, cost sharing may make each area viable whereas that full cost absorbed by the one area may be such that it makes that area unviable to proceed at all.*

Disadvantages of allowing both areas to develop may include:
- *Supply inconsistent with the regional planning framework.*
- *Over supply (if additional demand is not captured) may reduce/slow returns to the developer such that the investment required on infrastructure is uneconomic, and one or both areas don't proceed or are delayed as a result.*
- *If additional demand is not captured, each area proceeds at a slow rate delaying the critical mass required to support other services.*
- *Larger urban footprint than is needed, with resultant inefficiencies and adverse sustainability outcomes.*
- *Duplication of services, even if capital costs are met by developers, will result in some additional operational and interim costs until fully utilised.*

The LGMS has taken the position that at this stage, both areas are not required. This means that a "choice" needs to be made between the two areas. Some of the relevant merits to make this judgement are summarised below however in reality, the judgement required to be made is complex and it is open for people to place different weight on the various matters identified.

Issue	Gulmarrad	James Creek
Connectivity to other centres	Approx 1.5 km to the centre of Townsend (as measured to the proposed open space area)	Approx 4.5 km to Townsend, measured to the site of planning proposal application
Ability to create "critical mass" for other services	Forms part of a locality with an existing population of about 1,000	Essentially creating a new urban area with a relatively small local population at present
Ability to build on existing services	In proximity to an existing public school. Has cycleway/pedestrian access to Townsend	No existing services
Biodiversity	Requires some sacrificing of native vegetation – not supported by DECCW. Existing consents allow clearing in any case.	Relatively fewer constraints

Ability to redress past low density development trends	*Involves rezoning of rural residential to residential and hence positively contributes*	*No impact on rural residential land supply*
Servicing generally	*Water upgrade already planned*	*Relatively more expensive as has additional costs of Gardiners Road and James Creek Road upgrade. May defer/obviate need to upgrade Cameron/Jubilee St intersection as it would concentrate more traffic on James Creek Road and Yamba Road. This option does provide for those road upgrades.*
Servicing costs, capital (indicative)	*STP upgrade - $2.0M-$3.0M* *Sewer Transfer system - $1.0-$1.5* *(Total $3.0M-$4.5M or $4,200 -$6,400 per dwelling)*	*STP upgrade - $2.0-3.0M* *Sewer Transfer system - $0.9M* *Gardiners Rd upgrade - $0.2M* *James Ck Rd upgrade – uncosted* *Cycleway – uncosted*
Urban footprint generally	*Smaller overall footprint because of relative closer proximity to Townsend and by developing in existing rural residential area*	
Ability to generate additional demand		*Provides a new area that may have market attractiveness. May attract demand from Yamba currently not met due to land supply/servicing constraints at Yamba*
Relationship to surrounding land uses		*Dept. I & I suggest greater potential constraint imposed by adjacent regionally significant farmland*

Recommendation: The LGMS recommends that Gulmarrad is the preferred site in view of the identified demand and other planning considerations and review the need for James Creek in five years.

Options:

6.1 Support development of both areas and let market forces determine development rates, subject to adequate arrangements being made by developers from both areas to share upgrading costs for the Woodford Island sewage treatment plant and increased operational costs as part of the rezoning process for James Creek. This option takes the position that the advantages mentioned above outweigh the potential risks/disadvantages. In particular, it places weight on the infrastructure costs and risks being borne by the developers and the uncertainties of timing and scale of development in Yamba.

6.3 *Support the development of James Creek rather than Gulmarrad."*

The applicant's rationale for supporting the planning proposal emphasises:

- The developer's willingness to forward fund required infrastructure, including water & sewerage, improved flood immunity for Gardiners Road, sealing of James Creek Road, an open space area at the "clover leaf"/Harwood Bridge
- Natural attributes and aspect of the area
- That the LGMS's demand analysis is understated and given constraints to development at West Yamba, demand for development in this area is higher than assessed
- Provision of housing choice – the draft LGMS provides for a "monopoly" for the Gulmarrad area
- Ability to distribute traffic flow away from an identified constraint at Cameron/Jubilee Streets
- Developer will invest elsewhere if required to wait five years to have the matter re-addressed

Many of these justifications are difficult to quantify but have some merit. As discussed in the LGMS and the report on it, the significance given to these various issues is in part subjective. The ability to provide for housing choice (although the LGMS does identify significant supply still available in Maclean and Townsend), a sharing of infrastructure costs between developers and the potential to accommodate demand not currently able to be met in adjoining catchments (i.e. West Yamba) are strong arguments.

To the contrary however, the recommended draft LGMS meets the Mid North Coast Regional Strategy's dwelling targets without an additional supply at James Creek and hence it has taken a precautionary approach to avoid over supply, on the basis that dilution of demand may significantly slow the creation of a critical mass to deliver a wide range of accessible urban services.

This represents the difficult choice that is required to be made.

CONSULTATION

Should Council support the planning proposal, agency and public consultation requirements will be specified by the State Government's Planning Gateway, should it too endorse the proposal.

SUSTAINABILITY ASSESSMENT

Summary Statement
The LGMS recognises that there are many competing desirable planning objectives due to past development and zoning decisions and the characteristics of the physical environment. It is also influenced by broader economic and social factors. In this context, a "perfect" planning outcome is not realistic and hence, the strategy needs to take a balanced approach which in some cases trades off competing objectives. It has attempted to make those trade offs transparent. This planning proposal application needs to be considered in this context.

Ecology
The planning proposal has few direct impacts due to past clearing on the site.

Economic
Judgements on the economics of land development and the impact on that by the amount of land supply are difficult but central to this application.

Social & Cultural
The recommended Strategy seeks to establish a settlement pattern that enhances the ability to provide access to existing and new human services.

Human Habitat & Infrastructure
The recommended LGMS seeks to establish a settlement pattern that is efficient in terms of infrastructure provision and one that creates healthy, strong communities. In particular, it seeks to minimise the urban footprint and create a new residential neighbourhood that is well connected to the existing settlement hierarchy. The planning proposal is central to the LGMS's preferred outcome. Financing of critical infrastructure is critical to this application. The ability to allow two areas to proceed and hence share infrastructure costs carries with it a risk that over supply results in marginal returns and lack of provision of a range of other urban services. To the contrary, staging of development may increase real demand for that area by limiting supply, however with a risk that the upfront infrastructure costs are so high as to make the development unviable.

Governance
The LGMS implements the identified outcomes from the Mid North Coast Regional Strategy at a local level.

Guiding Sustainability Principles
The following guiding sustainability principles are relevant to this issue:

- Protecting ecological processes and biodiversity.
- Supporting social and intergenerational equity.
- Promoting ecologically sustainable development.
- Encouraging community involvement and awareness.
- Taking a precautionary and anticipatory approach.
- Focusing on continuous improvement.

OPTIONS

1. Council not endorse the planning proposal application as it is inconsistent with Council's adopted local growth management strategy.

2. Council endorse the planning proposal and refer it to the Planning Gateway seeking permission to exhibit it for public comment. Note : This option assumes that Council has endorsed the LGMS with an amendment that supports development of this land.

3. Council endorse another course of action consistent with its decision on the LGMS.

FINANCIAL IMPLICATIONS

The proponent has prepared the draft planning proposal and paid Council's adopted fee. Broader financial consequences of development options in the area are addressed in the LGMS.

Des Schroder
DEPUTY GENERAL MANAGER – ENVIRONMENTAL & ECONOMIC

Prepared by: David Morrison
Section: Strategic & Economic Planning
Attachment: A : Planning Proposal Application

Committee:	**ENVIRONMENT, ECONOMIC & COMMUNITY**
Section:	Strategic & Economic Planning
Date:	12 July 2011
Item: 12.110/11	**MACLEAN URBAN CATCHMENT LOCAL GROWTH MANAGEMENT STRATEGY**

ATTACHMENT

Also refer to supplementary report 12.128/11.

REPORT SUMMARY

This report addresses comment received during the exhibition process on the Maclean Urban Catchment Local Growth Management Strategy (the LGMS).

OFFICER'S RECOMMENDATION

That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of the report, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environmental Plan.

RECOMMENDATION BY COMMITTEE

Tiley/Hughes

That

The committee call for a report from staff for consideration at the Ordinary Council Meeting on 19 July 2011 to address the various suggestions contained in the deputations received today.

Voting recorded as follows:
For: Howe, Hughes, Tiley, Williamson
Against: Nil

COUNCIL RESOLUTION – 12.110/11
(Crs Tiley/Comben)

1. **That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of report 12.110/11, and further amend the strategy to include Lot 104 DP 751388, James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developer for James Creek for Gardiners Road and James Creek Road upgrading including cycleway, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environmental Plan.**

2. **That the strategy be reviewed in five years at which time addition to the urban growth areas west of Sheehans Lane and north of James Creek Road, referred to as priority 2 area, be reconsidered.**

Schedule of Recommended Amendments

Draft
Maclean Urban Catchment
Local Growth Management Strategy

Recommended Changes following exhibition

LGMS Reference	Recommended Change	Reference
Section 3.2 Page 11	Add the following to the end of paragraph 3 in Section 3.2, James Creek : "The LGMS not support the rezoning of the James Creek growth area at this stage but this position should be reviewed in 5 years in light of housing demand and progress in the development of other areas identified by the LGMS."	Submission P2.1
Section 1.2 Pages 42-43	Add the following at the end of paragraph 8 : "There are two activated development consents over two land parcels at the corner of Brooms Head Road and Sheehans Lane, for 65 and 43 rural residential lots respectively, which include clearing. It is likely that these sites would be developed under those consents in the absence of, or possibly notwithstanding this Strategy. That outcome is considered to be significantly adverse compared to the overall direction of the recommended Strategy to more efficiently utilise land within the existing urban area defined by the rural residential zonings.	Submission 8.1
Section 2.3 Page 6	Under *The Natural Environment"* replace "sacrifice" with "compromise".	Submission 9.2
Illustration 7.3 And Section 7.2 page 28	Amend Illustration 7.3, Indicative Structure Plan, to delete the reference to *"area to be revegetated"*. Amend the LGMS not to require a revegetated buffer west of Sheehans Lane, with appropriate commentary and amendment to the document. (Section 7.2 and Illustration 7.3), however require suitable planting and treatment at the Sheehans Lane frontage of the proposed residential area in association with a development application. Delete the following statement from Section 7.2 *"Land to the west of Sheehans Lane should be zoned for environmental protection and densely planted as an offset for biodiversity impacts with clearing of the larger site."*	Submission 11.4 General comments
Illustration 3.1 Page13	Amend Illustration 3.1 reflect the following population estimates for James Creek, as follows : *"Existing population 100* *Future population 220"*	Submission 18.4
Section 7.2	The following be added to Section 7.2 : *"Residential development in Gulmarrad will be required to maintain the vegetation retention obligations, in total, under existing commenced development consents. The development application process will explore potential to provide connectivity between any such areas. "*	Submission A3.3

Section 3.3, page 12	**The LGMS include the following recommendations at page xii (Executive Summary) and at Section 3.3, page 12 :** • **Developer contributions being required for future sealing of McIntyres Lane and Cameron Jubilee/Street intersection** • **Upgrading of the Cameron/Jubilee Street intersection to occur upon the threshold of development identified in the Cardno Eppell Olsen additional traffic report, June 2011** • **Development consents only be granted to a combined total of the projected 2021 yield until such time as the Highway or identified intersections are upgraded** • **Development contributions for local traffic upgrades as above made obsolete by the Highway upgrade be redirected towards other local traffic facilities in the catchment** **An appropriate paragraph be inserted to summarise the additional traffic assessment.**	**Submission A2.1**
Illustration 1.1 Locality Plan	**Specify that the "proposed employment area" and "proposed urban area" are as defined by the Mid North Coast Regional Strategy, 2009, for further investigation.**	**Staff comment, for clarity**
Pages 16, 34, 38,42, 43	**Various typing/grammatical changes – no change to meaning**	**Staff comment, for accuracy**
Illustration 7.3	**Amend to delete Collector Street connection to Brooms Head Road, and to delete existing developed rural residential land from the south east portion of the proposed residential area**	**Staff comment, reflects conceptual design for the area and acknowledges existing development**
New Appendix C1	**Insert the additional Cardno Eppell Olsen traffic assessment as Appendix C1.**	

Voting recorded as follows:
For: **Councillors Williamson, Comben, Dinham, Howe, Hughes, McKenna, Simmons, Tiley and Toms**
Against: **Nil**

BACKGROUND

The Mid North Coast Regional Strategy, 2009 (MNCRS) provides the over arching strategic planning policy to guide future residential development in the Clarence Valley to 2031. In addition to establishing a number of key planning policies to guide future zonings and development applications, it identified dwelling targets for the local government area for this period. The Strategy specifies a need for an additional 7100 dwellings to 2031 and in addition to existing urban areas, identified Growth Areas that are suitable for further consideration to accommodate this growth target. Three of those Growth Areas – Clarenza, Junction Hill and West Yamba have since been rezoned as planning investigations, for each were already underway when the MNCRS was adopted. The fourth area identified – Gulmarrad-James Creek – is the subject of this Local Growth Management Strategy. The LGMS is identified by the MNCRS as the mechanism for a planning

assessment of the Growth Area, to determine if, and how much of that area is suitable for residential development. The LGMS will be required to be adopted by the Director-General, Department of Planning in order for specific rezoning proposals to proceed.

The Gulmarrad-James Creek Growth Area sits within a broader catchment centred on Maclean, a major town under the MNCRS, and Townsend. A logical consideration of the need and options for residential within the Growth Area needs to consider that whole catchment and hence Council resolved to prepare the LGMS over the wider "Maclean Urban Catchment". Using the MNCRS dwelling targets as a starting point, and the existing commitments in existing and committed land supplies, the LGMS primarily seeks to accommodate the remaining supply required to meet the MNCRS targets.

There have been a number of developer driven proposals in past years to rezone land in this area but, in the absence of an approved strategy endorsed under the North Coast Regional Environmental Plan, (which this LGMS effectively becomes), these have not been able to be progressed. More specifically, a formal rezoning application was lodged in 2004 for land at the corner of Brooms Head Road and Sheehans Lane, to rezone the site from rural residential to residential and neighbourhood business. This has, with Government approval, recently been converted to a "planning proposal" under more recent legislation changes and has been exhibited concurrently with the draft LGMS. Also, a number of broader requests were made to rezone land at James Creek some years ago. A formal rezoning application (planning proposal) has now been submitted to Council in June 2011. A third planning proposal was submitted to Council in 2010 to rezone rural land to rural residential at the eastern periphery of Gulmarrad. This application has been previously reported to Council but deferred at the request of the applicant to be considered in conjunction with the LGMS.

Separate reports have been prepared for Council to consider these three specific planning proposals, the first to decide whether to continue support and refer it back to the Government seeking final approval, the other two to determine whether to refer it to the Planning Gateway seeking permission to exhibit. Council's decision on each will need to be supported by the over arching LGMS and hence Council is asked to determine the LGMS first, and then make decisions on each planning proposal in a consistent manner.

The LGMS also addresses potential for industrial land at Townsend, on land currently zoned investigation, and identified by the MNCRS's Growth Area mapping.

CONSULTATION

Government Agency consultation was undertaken through the preparation of the draft LGMS, initially through an agency planning focus meeting followed up by written advices, and then again during the formal public exhibition period (refer to Section 9 of the LGMS).

The draft LGMS was initially exhibited for public comment for 7 weeks from the beginning of December 2010 to 21 January 2011, but that was extended by a further four weeks on request, making a total of 11 weeks. "Late submissions" have been accepted. During exhibition, an open day was held in Maclean to provide for direct discussion with Council's consultant and staff. The draft LGMS has been freely available on Council's website and landowners within the Growth Areas were provided with direct correspondence. A detailed summary of each submission and planning comments on each is contained at Attachment 3.

Internal staff consultation has occurred throughout the preparation and review of the LGMS and is embedded in the document.

A broader discussion of the common and most significant matters raised through the consultation is contained in the Issues section below. A number of the issues overlap to an extent (such as demand and servicing issues).

ISSUES

1. Overview

Section 3 of the LGMS provides an overview of the setting/context for development in the catchment and defines the planning direction recommended. Central to the LGMS is an acknowledgement that due to a range of physical (including environmental) constraints, past zonings and development patterns, and the need to establish a sustainable and efficient settlement pattern for the future, there is not a "perfect" solution that meets all planning criteria. Accordingly, the LGMS seeks to provide a balanced approach in view of at times competing planning aims. This balance requires judgements in some instances where there are good grounds for differing approaches, depending on the weight given to a particular issue. The LGMS has attempted to be very transparent in this respect by addressing a range of development scenarios for each area depending on the relative merit given to critical constraints.

Some of the key planning concepts that have influenced the draft LGMS include:

- There is approximately 1,000 lots of potential land supply in the catchment, which based on past dwelling rates, represents in the order of 20 years supply. In the order of additional 700 dwellings is required to meet the MNCRS target for 2031.
- Two thirds of that supply and two thirds of the historical development rates have occurred in the form of rural residential development (2 dwellings per hectare) rather than at conventional densities. The LGMS identifies that this is an unsustainable trend on a number of grounds and hence seeks to reverse it.
- Creating more compact, well located urban neighbourhoods with critical mass to sustain other urban services. Higher densities in proximity to services will be encouraged.
- The existing urban hierarchy should be built upon as it provides the basis for access to services ("hard" and "soft") and build upon established locality identities and character

2. Strategy Summary

In brief, the LGMS proposes to reinforce Maclean's role as the major town in the catchment supported by interconnected satellite suburbs of Townsend and Gulmarrad, as well as a range of smaller villages and hamlets, each with their own distinct boundaries and identities. This hierarchy reflects and builds on existing settlement patterns and natural constraints. James Creek is identified as a possible third satellite in the future if the need arises, subject to regular review of demand.

This provides for an interconnected urban catchment of about 8,800 people by 2031, an increase of about 4,000 over the current population. Three quarters of that growth (about 3,000 people) will be in residential rather than rural residential development. This represents a moderate increase in development rates and requires an average of 80 dwellings per annum within the catchment (as against current rates of about 50 dwellings per annum) if that population yield is to be achieved by 2031. However, these population targets effectively represent an ultimate capacity for each of the areas and align with the dwelling targets of the MNCRS. They will take longer or shorter to attain depending on real demand/take-up.

The LGMS also identifies potential for a small expansion to the Townsend industrial estate.

Illustration 3.1 for the LGMS represents this diagrammatically.

3. Feedback Generally

There has been little or no objection to the fundamental direction of the LGMS, and in particular to the aim of increasing the relative proportion of residential as against the historical preponderance of rural residential development in the catchment resulting in the creation of a new residential suburb at Gulmarrad with a neighbourhood centre. There has been some support for the central intent and direction of the LGMS. Comments relate more to matters of detail, managing urban

impacts and seeking additional land to be identified for rezoning. These are addressed in more detail in the following.

4. Land Supply & Demand

A number of submissions make comment about the land supply and demand analysis contained in the LGMS, principally suggesting that it is understated with the corresponding conclusion that additional land, at James Creek, should also be released (see Submissions 17.1, 17.2, 17.5, 18.5). The LGMS is required to be consistent with broader strategic policy requirements and in this sense, it aligns with the MNCRS's dwelling targets for the Clarence Valley when viewed in conjunction with other zoned and committed release areas. The MNCRS's target of 7,100 dwellings to 2031 already has in it an allowance for vacancy, housing choice etc and hence is somewhat in excess of real demand. The LGMS has identified, based on historical demand, that there is in the order of 20 years supply of land in the catchment, or about 13 years if demand increases by 50%.

To release additional land to that recommended by the LGMS (such as at James Creek) would be to assume an even greater increase in demand and is effectively based on the notion of supply led demand – i.e. increasing the supply of land will encourage further development. Submission 18 and the separate planning proposal application for James Creek are largely based on this principle. That Planning Proposal application (reported separately) identifies a declining trend in dwelling rates over the past few years as a justification to release additional land. Presumably, that requires capturing additional demand from within the local area (eg Yamba) or externally (eg South East Queensland). Continued residential development at Yamba has uncertainties in terms of costs and timing as it is reliant on a commitment to augment the sewerage treatment plant and to obtain a source of filling. Consequently, development costs are likely to be relatively high and it is unclear as to how this may influence future housing choices. In any case, notwithstanding that West Yamba has received rezoning, these development issues mean that the provision of additional land for housing in Yamba is unlikely in the next few years, with a "latent demand" the result.

The risk of basing a Strategy on this assumption is that if that additional demand does not eventuate, committed areas will be competing with each other for the same market with the consequence that they develop at a slow rate, services are under utilised and therefore inefficient, and it takes longer to create that "critical mass" of development that will support a range of other services that people require, such as neighbourhood shops, parks, social services, etc.

In terms of providing choice, the LGMS identifies that there will be some continued redevelopment of existing areas in Maclean, and take up of existing undeveloped zoned areas in Maclean and Townsend, in the rural residential areas of Gulmarrad, and the recommended new residential area at Gulmarrad.

Hence, the LGMS suggests a review every five years to monitor real demand and to revisit the need to release additional land based on that. This is considered to be a sensible and precautionary approach especially given that the LGMS has assumed a significant increase in demand in any case.

5. Suitability of other land within the MNCRS Growth Areas

Some submissions are of the view that other lands identified within the MNCRS's Growth Area mapping has less or similar constraints compared to those recommended for development at Gulmarrad and hence should be rezoned too (refer submissions 2.1, 3.1, 7.2, 11.3, 13.1, 16.1, 17.1, 18.1, 19.1). The Growth Area mapping only identifies, from a regional perspective, areas that are potentially suitable for residential development but subject to further planning assessment through the local growth management strategy process. There is no commitment in the MNCRS that all land within those areas will be developed. The LGMS addresses a range of planning factors including need/demand (as above), constraints, servicing etc and balancing these to create sustainable communities. In short, the Growth Area mapping identifies capability whereas the

LGMS provides a deeper analysis to address suitability. Unfortunately, identifying areas within the Growth Area mapping has created expectations among landowners that cannot necessarily be realised.

6. Gulmarrad, James Creek or Both

Submissions from land owners within the James Creek area suggest that this area is suitable for residential development and should be identified as such by the LGMS (refer submissions 2.1, 3.1, 16.1, 18.1, 18.2). Discussion on demand (Issue 4 above) is central to this matter. It is open to Council take to a market based approach to land release and let the market determine which area and the rate at which they develop. This approach would be based on the developers in the respective areas meeting the full cost of required service augmentations (discussed later at Issue 7). The relative merits of allowing both areas to proceed is problematic and requires some conjecture.

The advantages of allowing both areas to develop may include:

- Increased competition and choice, leading to lower housing prices and reduction in the risk of a single developer controlling the local market.
- An ability to attract additional demand not being met elsewhere or from outside the catchment, particularly from Yamba given infrastructure constraints there.
- Allied to the above, increased local economic development.
- Key infrastructure costs at the sewerage treatment plant can be shared. As this is a significant upfront cost, cost sharing may make each area viable whereas that full cost absorbed by the one area may be such that it makes that area unviable to proceed at all.

Disadvantages of allowing both areas to develop may include:

- Supply inconsistent with the regional planning framework.
- Over supply (if additional demand is not captured) may reduce/slow returns to the developer such that the investment required on infrastructure is uneconomic, and one or both areas don't proceed or are delayed as a result.
- If additional demand is not captured, each area proceeds at a slow rate delaying the critical mass required to support other services
- Larger urban footprint than is needed, with resultant inefficiencies and adverse sustainability outcomes.
- Duplication of services, even if capital costs are met by developers, will result in some additional operational and interim costs until fully utilised.

The LGMS has taken the position that at this stage, both areas are not required. This means that a "choice" needs to be made between the two areas. Some of the relevant merits to make this judgement are summarised below however in reality, the judgement required to be made is complex and it is open for people to place different weight on the various matters identified.

Issue	Gulmarrad	James Creek
Connectivity to other centres	Approx 1.5 km to the centre of Townsend (as measured to the proposed open space area)	Approx 4.5 km to Townsend, measured to the site of planning proposal application
Ability to create "critical mass" for other services	Forms part of a locality with an existing population of about 1,000	Essentially creating a new urban area with a relatively small local population at present
Ability to build on existing services	In proximity to an existing public school. Has cycleway/pedestrian access to Townsend	No existing services
Biodiversity	Requires some sacrificing of native vegetation – not supported by DECCW. Existing consents allow clearing in any case.	Relatively fewer constraints
Ability to redress past low density development trends	Involves rezoning of rural residential to residential and hence positively contributes	No impact on rural residential land supply
Servicing generally	Water upgrade already planned	Relatively more expensive as has additional costs of Gardiners Road and James Creek Road upgrade. May defer/obviate need to upgrade Cameron/Jubilee St intersection as it would concentrate more traffic on James

		Creek Road and Yamba Road. This option does provide for those road upgrades.
Servicing costs, capital (indicative)	STP upgrade - $2.0M-$3.0M Sewer Transfer system - $1.0-$1.5 (Total $3.0M-$4.5M or $4,200 -$6,400 per dwelling)	STP upgrade - $2.0-3.0M Sewer Transfer system - $0.9M Gardiners Rd upgrade - $0.2M James Ck Rd upgrade - uncosted Cycleway - uncosted
Urban footprint generally	Smaller overall footprint because of relative closer proximity to Townsend and by developing in existing rural residential area	
Ability to generate additional demand		Provides a new area that may have market attractiveness. May attract demand from Yamba currently not met due to land supply/servicing constraints at Yamba
Relationship to surrounding land uses		Dept. I & I suggest greater potential constraint imposed by adjacent regionally significant farmland

Recommendation: The LGMS recommends that Gulmarrad is the preferred site in view of the identified demand and other planning considerations and review the need for James Creek in five years.

Options:

6.1 Support development of both areas and let market forces determine development rates, subject to adequate arrangements being made by developers from both areas to share upgrading costs for the Woodford Island sewage treatment plant and increased operational costs as part of the rezoning process for James Creek. This option takes the position that the advantages mentioned above outweigh the potential risks/disadvantages. In particular, it places weight on the infrastructure costs and risks being borne by the developers and the uncertainties of timing and scale of development in Yamba.

6.2 Support the development of James Creek rather than Gulmarrad.

7. Sewer & Water

Upgrading of the Woodford Island sewage treatment plant (estimated to cost in the order of $2.0M-$3.0M) is required. As both Gulmarrad and James Creek are outside the sewerage catchment adopted under Council's Developer Services Plan, Council's policy adopted in December 2010 requires that that upgrading be at the expense of the developer. Should both areas be supported by the adopted LGMS, that cost could be shared. Sewage transfer systems to each area from Townsend is still required and likewise is at the cost of the developer. Those costs for each are estimated to be in the order of $1.0M.

In regard to water, Gulmarrad is within the existing catchment and augmentation is already planned by Council, hence there is no additional capital cost to developers for this area. James Creek would require additional augmentation.

These issues have been clearly identified in the LGMS and there have not been any submission or objection to them at this stage.

8. Road Network and Traffic

The traffic assessment undertaken as part of the LGMS identified that the road network was capable of accommodating development as proposed, although some capacity issues at the Cameron/Jubilee Street were identified that would need some augmentation. The RTA requested additional traffic assessment on potential impact on the Highway, specifically its intersections with Cameron Street and McIntyres Lane (refer Submission A2). The LGMS assumed, based on the Agency Focus Meeting, that the planned Highway upgrade would overcome any issues however the RTA indicate that as a firm timing for that upgrade has not been announced, that the LGMS

should proceed on the basis of the existing Highway. Hence, an additional assessment was commissioned to investigate these intersections and to further address the Cameron/Jubilee Street intersection (see Attachment 5).

The assessment identifies that there should not be an adverse impact on the existing Highway arising from development as envisaged by the LGMS. It identifies a development threshold after which an upgrade of the Cameron/Jubilee Street intersection should occur, unless the Highway upgrade proceeds in the meantime. This threshold equates to 50% of the projected 2021 development yield, being 345 dwellings in the Townsend/Gulmarrad area (nominally 282 at Gulmarrad and 63 at Townsend) and 31 industrial lots at Townsend. The 5 year review of the LGMS as recommended in Section 10 can review this in terms of traffic performance and immanency of the Highway upgrade.

It is recommended that the LGMS include the following recommendations at page xii (Executive Summary) and at Section 3.3, page 12:

- Developer contributions being required for future sealing of McIntyres Lane and Cameron Jubilee/Street intersection.
- Upgrading of the Cameron/Jubilee Street intersection to occur upon the threshold of development identified in the Cardno Eppell Olsen additional traffic report, June 2011.
- Development consents only be granted to a combined total of the projected 2021 yield until such time as the Highway or identified intersections are upgraded.
- Development contributions for local traffic upgrades as above made obsolete by the Highway upgrade be redirected towards other local traffic facilities in the catchment.

9. Buffers to Agricultural Land

The LGMS recommends that land on the western side of Sheehans Lane be revegetated as a buffer to the residential development proposed to the east. The LGMS recommendation arises in part from strict application of agricultural buffer guidelines from the *Living and Working in Rural Areas"* (LUCRA) document. Its recommendations are a guideline only and are based on there being no other ameliorating measures, and assumes aerial spraying. Prevailing weather conditions and topography are also factors that need to be taken into account as to whether the rather arbitrary 300 metre buffer under the LUCRA guidelines is appropriate in this circumstance. This issue is raised by a number of submissions. Mechanisms to require developers from one site to revegetate another is difficult, especially in the context of existing consent entitlements. It is considered that the existing rural residential zoning on the western side of Sheehans Lane provides a logical gradation of land use intensity and with additional ameliorating measures to be undertaken on site of proposed residential development. Notwithstanding the presence of cane farming on the floodplain to the west, there is only a small portion of land in that area mapped as regionally significant farmland. This and the long term Highway relocation likely in this area lessens the need for extensive treatment of the interface between the proposed residential land and farming activities. Treatment of the Sheehans Lane boundary of the future residential area, together with the transitional land use provided by the existing rural residential zone are considered sufficient to address this issue.

The LGMS (Section 7.2, page 28) also recommends that this area be back zoned from rural residential to environmental protection and densely revegetation also as an offset for clearing associated with development opposite on the east of Sheehans Lane. Existing consents on the land east of Sheehans Lane provide clearing entitlements that make this recommendation difficult to enforce. Also, there is no clear mechanism to require the developer of one site to effectively purchase another unrelated site, complicated by the back zoning issue. For these reasons, the outcome suggested by the draft LGMS is not considered to be feasible in this regard.

In terms of James Creek, the LGMS indicated that most of the Growth Area would be subject to the buffers suggested by the LUCRA, except for the site subject of a planning proposal application (separate report). While these guidelines need to be considered in closer detail, Agency submissions have indicated greater potential for conflict in this area due to the presence of regionally significant farmland and biodiversity issues. This aspect would need to be addressed in greater detail if the James Creek area were included in the LGMS.

Recommendation:
That the LGMS be amended not to require a revegetated buffer west of Sheehans Lane, with appropriate commentary and amendment to the document. (Section 7.2 and Illustration 7.3), however require suitable planting and treatment at the Sheehans Lane frontage of the proposed residential area in association with a development application.

Option 9.1 Retain the recommendation for a vegetated buffer on the western side of Sheehans Lane.

10. Rural-Residential Land West of Sheehans Lane

A number of submissions representing landowners west of Sheehans Lane request consideration for residential development. The land is zoned rural residential at the present. Identification as a Growth Area under the MNCRS does not carry with it a commitment to rezone. The MNCRS clearly indicates that the Growth Areas are indicative of potential for development and that potential should be further addressed through a local growth management strategy (such as this LGMS). While many of the planning criteria may apply in similar terms to this and other lands, the LGMS is more than a physical capability assessment – it also addressed suitability. In this sense, other urban design issues such as creating cohesive, integrated urban settings is important and not equally applicable to all lands within the identified growth area. The interface with adjoining agricultural uses, logistics of developing small areas at a residential density and the desirability of having cohesive neighbourhoods, road access issues onto Sheehans Lane and Brooms Head Road and the assessed demand have all influenced the LGMS's recommendation to retain the existing zoning in this area.

11. Biodiversity Offsets

DECCW have objected to the inclusion of the southern portion of the proposed residential area at Gulmarrad on the basis of the existing vegetation on the site. They have also requested that offset planting be required for the other land within that area on the basis of past clearing.

Both sites are zoned rural residential and are subject to development consents that have acknowledged commencement (DA 2004/0720 for 43 rural residential lots and DA 2004/0279 for 68 rural residential lots respectively). DECCW's position is noted.

This development for the site with existing vegetation authorised clearing of house sites throughout that subdivision, with some vegetation at the rear of blocks being retained. Should the land be excluded from the LGMS, that consent can proceed in any case. It would be excluded from further approvals under the Native Vegetation Management Act upon the commencement of the CVLEP 2011. In these circumstances, it is likely that the site will be substantially cleared should it be excluded from the LGMS. The LGMS has recommended residential development for this land in part to assist creation of a "critical mass" of residential development in this locality to sustain other commercial and urban services. Development of this site also assists in creating connectivity to the adjoining residential area, an issue already identified by the local community. Also, the vegetation on the site is unconnected to other vegetation and is not within an identified corridor under Council's Biodiversity Management Plan. The LGMS's was also influenced by the establishment of a corridor to the eastern side of the rural residential area, albeit through different ownerships and planning mechanisms.

The LGMS openly identifies that its recommendations require a "sacrificing" of this vegetation in return for what the LGMS suggests is a sound planning return. The LGMS acknowledged that the vegetation on the site is relatively isolated and has already been compromised. DECCW do not agree and hence, this is a matter that, if the LGMS is unchanged in this aspect, will remain an unresolved Agency object on which the Department of Planning and Infrastructure will need to determine.

Seeking offset planting for past clearing on the second site raises similar issues. The suggestion of unauthorised clearing has not been substantiated and should not therefore form the basis of a recommendation for offset biodiversity planting. The entitlements of that consent can be taken up by the owner at any time. The LGMS identifies a better planning outcome for the site by rezoning it for residential development with a small neighbourhood centre.

Recommendations:
That the LGMS retain its recommendation for residential development on Lot 71 DP 1156995, however, that residential development for this land and the adjoining Lot 2 DP 1036498 be required to maintain in total area the requirements of existing consents in regard to clearing, and seek to provide linkages to each other at the development application stage.

Options:
11.1 Amend the LGMS to require offset plantings for land proposed to be rezoned residential.

11.2 Amend the LGMS to delete areas of existing vegetation from the recommended residential areas.

SUSTAINABILITY ASSESSMENT

Summary Statement
The LGMS recognises that there are many competing desirable planning objectives due to past development and zoning decisions and the characteristics of the physical environment. It is also influenced by broader economic and social factors. In this context, a "perfect" planning outcome is not realistic and hence, the strategy needs to take a balanced approach which in some cases trades off competing objectives. It has attempted to make those trade offs transparent.

Ecology
The LGMS acknowledges that there will be some compromising of ecological values. However, it also acknowledges that if all areas of ecological significance were avoided, the resultant settlement pattern would have a larger footprint and be less connected, which has other adverse overall sustainability impacts.

Economic
The recommended strategy provides for continued urban development which will require a development industry to support it.

Social & Cultural
The recommended Strategy seeks to establish a settlement pattern that enhances the ability to provide access to existing and new human services.

Human Habitat & Infrastructure
The recommended strategy seeks to establish a settlement pattern that is efficient in terms of infrastructure provision and one that creates healthy, strong communities. In particular, it seeks to minimise the urban footprint and create a new residential neighbourhood that is well connected to the existing settlement hierarchy.

Governance
The LGMS implements the identified outcomes from the Mid North Coast Regional Strategy at a local level.

Guiding Sustainability Principles
The following guiding sustainability principles are relevant to this issue:

- Protecting ecological processes and biodiversity.
- Supporting social and intergenerational equity.
- Promoting ecologically sustainable development.
- Encouraging community involvement and awareness.
- Taking a precautionary and anticipatory approach.
- Focusing on continuous improvement.

OPTIONS

1. Endorse the draft LGMS with changes as identified in the "Schedule of Recommended Amendments" at the end of the report.

2. Endorse the LGMS with other amendments as decided appropriate. This will involve Council placing a different emphasis on any of the relevant issues from what has been taken in the LGMS.

3. Not endorse the LGMS. This option will require additional direction as to what other course of action is proposed. Rezoning proposals within the catchment cannot proceed without a LGMS endorsed by the Director-General.

FINANCIAL IMPLICATIONS

The preparation of the LGMS has been funded by Council. There are broader public and private economic implications arising from whatever land release strategy that Council adopts and these are addressed in detail in this report and in the draft LGMS. Whilst difficult to quantify, minimising the overall public and private costs of urban growth is a major consideration underpinning the LGMS.

Des Schroder
DEPUTY GENERAL MANAGER – ENVIRONMENTAL & ECONOMIC

Prepared by: David Morrison
Section: Strategic & Economic Planning
Attachments: 1 : Local Growth Management Strategy Part A
2 : Recommended Changes to LGMS
3 : Summary of Individual Submissions
4 : Copies of Individual Submissions
5 : Cardno Eppell Olsen Traffic Assessment

Schedule of Recommended Amendments

Draft
Maclean Urban Catchment
Local Growth Management Strategy

Recommended Changes following exhibition

LGMS Reference	Recommended Change	Reference
Section 3.2 Page 11	Add the following to the end of paragraph 3 in Section 3.2, James Creek : "The LGMS not support the rezoning of the James Creek growth area at this stage but this position should be reviewed in 5 years in light of housing demand and progress in the development of other areas identified by the LGMS."	Submission P2.1
Section 1.2 Pages 42-43	Add the following at the end of paragraph 8 : "There are two activated development consents over two land parcels at the corner of Brooms Head Road and Sheehans Lane, for 65 and 43 rural residential lots respectively, which include clearing. It is likely that these sites would be developed under those consents in the absence of, or possibly notwithstanding this Strategy. That outcome is considered to be significantly adverse compared to the overall direction of the recommended Strategy to more efficiently utilise land within the existing urban area defined by the rural residential zonings.	Submission 8.1
Section 2.3 Page 6	Under *The Natural Environment"* replace "sacrifice" with "compromise".	Submission 9.2
Illustration 7.3 And Section 7.2 page 28	Amend Illustration 7.3, Indicative Structure Plan, to delete the reference to "*area to be revegetated*". Amend the LGMS not to require a revegetated buffer west of Sheehans Lane, with appropriate commentary and amendment to the document. (Section 7.2 and Illustration 7.3), however require suitable planting and treatment at the Sheehans Lane frontage of the proposed residential area in association with a development application. Delete the following statement from Section 7.2 "*Land to the west of Sheehans Lane should be zoned for environmental protection and densely planted as an offset for biodiversity impacts with clearing of the larger site.*"	Submission 11.4 General comments
Illustration 3.1 Page13	Amend Illustration 3.1 reflect the following population estimates for James Creek, as follows : "*Existing population 100* *Future population 220*"	Submission 18.4
Section 7.2	The following be added to Section 7.2 : "*Residential development in Gulmarrad will be required to maintain the vegetation retention obligations, in total, under existing commenced development consents. The development application process will explore potential to provide connectivity between any such areas.* "	Submission A3.3

Section 3.3, page 12	The LGMS include the following recommendations at page xii (Executive Summary) and at Section 3.3, page 12 : • Developer contributions being required for future sealing of McIntyres Lane and Cameron Jubilee/Street intersection • Upgrading of the Cameron/Jubilee Street intersection to occur upon the threshold of development identified in the Cardno Eppell Olsen additional traffic report, June 2011 • Development consents only be granted to a combined total of the projected 2021 yield until such time as the Highway or identified intersections are upgraded • Development contributions for local traffic upgrades as above made obsolete by the Highway upgrade be redirected towards other local traffic facilities in the catchment An appropriate paragraph be inserted to summarise the additional traffic assessment.	Submission A2.1
Illustration 1.1 Locality Plan	Specify that the "proposed employment area" and "proposed urban area" are as defined by the Mid North Coast Regional Strategy, 2009, for further investigation.	Staff comment, for clarity
Pages 16, 34, 38,42, 43	Various typing/grammatical changes – no change to meaning	Staff comment, for accuracy
Illustration 7.3	Amend to delete Collector Street connection to Brooms Head Road, and to delete existing developed rural residential land from the south east portion of the proposed residential area	Staff comment, reflects conceptual design for the area and acknowledges existing development
New Appendix C1	Insert the additional Cardno Eppell Olsen traffic assessment as Appendix C1.	

A) MATTERS IN RESPECT OF WHICH NOTICE HAS BEEN GIVEN

Refer to Item 12.110/11 for Council Resolution.

Council:		**SUPPLEMENTARY ITEM**
Section:		Strategic & Economic Planning
Date:		19 July 2011
Item:	**12.128/11**	**MACLEAN URBAN CATCHMENT LOCAL GROWTH MANAGEMENT STRATEGY**

ATTACHMENTS

REPORT SUMMARY

This report provides comments on the matters raised by deputations to the Environment, Economic & Community Committee Meeting held on 12 July 2011.

OFFICER'S RECOMMENDATION

That this supplementary report be considered in conjunction with Item 12.110/11.

BACKGROUND

Council's Environment, Economic & Community Meeting of 12 July 2011 (Item 12.110/11) considered a report on the Maclean Urban Catchment Local Growth Management Strategy, and received a number of deputations from the public on it. The Committee recommended :

"That the Committee call for a report from staff for consideration at the Ordinary Council Meeting on 19 July 2011 to address the various suggestions in the deputations received today."

ISSUES

A number of issues raised were common to more than one or all of the deputations. Many have been addressed in the planning report to the Committee (Item 12.110/11). They are summarised in the following. It is difficult to isolate individual issues as they over lap and are complex.

A. GENERAL ISSUES

1. Status of Growth Areas under the Mid North Coast Regional Strategy (MNCRS)

A number raised the notion that inclusion in the Growth Area mapping under the MNCRS automatically endorsed a residential zoning at some stage in the future. Point 5 in the planning report briefly addresses this point. The MNCRS (page 17) states :

"The growth area maps will be used by local councils to define the land available to investigate for release as they prepare their local growth management strategies. The local growth management strategies will need to be agreed between councils and the Department of Planning before any rezoning can take place."

"Not all land indentified within the growth areas or local growth management strategies will be developed for urban land uses. The rezoning of land ..... will be subject to more detailed investigations to determine capability and future yield."

Whilst the growth mapping under the MNCRS may have raised landowner expectations, it is clear that it does not guarantee ultimate rezoning. The Maclean Urban Catchment Local Growth Management Strategy (the LGMS) meets the MNCRS's requirements to further investigate the appropriate areas to develop and yield.

Some deputations indicated that the "signal" given by the Growth Area mapping had influenced land prices and investment decisions and on that basis, owners would be disadvantaged by the land not proceeding to rezoning. A search of Council's records indicate that just one property has changed hands since the release of the draft growth area maps, and that land values had only increased by relatively small amounts (0% to 16%) since that time. There is no evidence of land transactions in response to the growth area mapping. Hence, on this cursory look, there does not seem to be evidence of significant disadvantage.

2. Buffers

A number of submissions raised the matter of buffers from agricultural areas and appear to be of the understanding that the application of these buffers and interpretation of the policy context were the over-riding determinant of which land should be rezoning. Buffers are just one of the many planning factors that contribute to the LGMS recommendations and it is not correct to assume that decisions should be made on that basis alone. Precise details of buffers are partly a matter of detail that can be addressed during the rezoning and development application processes. However a range of other factors have contributed to the LGMS's overall conclusions, such as demand, servicing, well connected and integrated settlements, etc.

3. Competition & Market Choice

Inherent in a number of deputations is a policy position that the LGMS should allow market forces to determine how much land is released and how much market choice there is, and this is central to the issue of whether to release James Creek at this stage. Allied to this is financing of required infrastructure.

This issue is complex and has been addressed in detail in the planning report (refer sections 5 & 6). It also is influenced strongly by the demand/need issue. It is open for Council to provide for market forces and housing choice providing that there are not significant public adverse consequences or risk in doing so. In this case, the risk is that if there is a significant oversupply of land, too much supply may lead to long delays in creating "critical mass" to generate a range of other commercial and social services that are essential for sustainable communities. The LGMS has taken the view that releasing additional areas at this stage is difficult to justify based on the demand analysis.

4. James Creek release area

Whether to release land at James Creek as well as Gulmarrad is a common request. The decision is influenced by a number of issues including the need/demand, infrastructure financing, and ability to create sustainable communities. In essence, the LGMS recommends a settlement hierarchy based on Maclean being the major town supported by two satellite communities of Townsend and Gulmarrad. These are supported as they build on existing communities and services and are in close enough proximity to enable good connection (eg through the existing cycleway). The LGMS has not supported the establishment of a third satellite at this stage due to lack of established need/demand, relatively greater infrastructure requirements, and relatively lesser ability to connect to the other satellites. A review in five years is recommended by the LGMS.

Deputations suggest that if the costs of infrastructure are fully borne by the developers, then market forces should prevail as to timing. Further, they suggest that by releasing both areas concurrently, major sewage treatment plant upgrades can be shared, therefore positively enhancing each development proceeding by reducing development costs. It has been suggested that the developer of the James Creek planning proposal will forward fund infrastructure costs and has been in consultation with a developer within the Gulmarrad release area to share sewage treatment plant upgrades, however, Council has not received formal confirmation of ant developer arrangements.

Reference should be made to comments at 3 above. Should James Creek be supported for the reasons as put forward by the deputations, which are to essentially to facilitate the efficient and economic provision of services, Council should require adequate arrangements being made with the developers for each area to provide for and share the cost of that infrastructure as part of the rezoning process. This could be done through a voluntary planning agreement or some other binding mechanism.

5. The LGMS has been driven to support specific rezoning applications
Comments were raised that the LGMS has been prepared to support specific rezoning proposals received by Council. This is not correct as two specific rezoning proposals received have not been recommended for rezoning by the LGMS at this stage. A number of rezoning applications received over the years have contributed to identifying market forces and directions.

B. SPECIFIC DEPUTATIONS

1. Wendy Shepherd (on behalf of Skinner).
See Attachment 1.
Objects to the proposed buffer on the west of Sheehans Lane. In support provides a detailed assessment according to the LUCRA guidelines. Also raises concerns over mechanisms to implement offset planting within the buffer on land in a different ownership to the land being developed. Essentially presents a detailed review of buffers as a basis for determining land to be rezoned.

For some of the reasons indicated in the deputation, the recommended changes to the LGMS have deleted the vegetated buffer requirement and so, this aspect of the deputation is agreed with. See point A2 above.

The deputation also seeks to rezone the land within the growth area to residential. Refer to comments at A1. The matter is also addressed in the planning report at points 5 and 10. This request is not agreed with on the basis of lack of identified need (demand). Also, to rezone this and other land west of Sheehans Road will establish a residential neighbourhood truncated by a major road, which is not supported in terms of good neighbourhood design, for safety, and connectivity. It is likely to lead to a series of unconnected small scale subdivisions with multiple entries onto Sheehans Lane. A part of the land has an existing rural residential zone that allows some development potential. It is reiterated that the application of agricultural buffers is just one of many planning considerations and it should not be used alone to determine which and how much land should be rezoned.

2. John Bannister (on behalf of Mrs Gowland)
Owns land on the west side of Sheehans Lane. Requests residential zoning due to expectation created by the growth area mapping under the MNCRS.

Refer to comments at A1 and B1. Landowner expectations are misplaced as the MNCRS does not guarantee rezoning.

3. Wendy Shepherd (on behalf of Kahuna No.1)
Refer to Attachments 2 & 3.
This deputation raises a number of issues raised by others such as buffers. As mentioned previously, it is not correct to presume that buffers are the main determinant of the LGMS's recommendations. However, central to this deputation is the request to include the client's land (subject of a rezoning application) in the area recommended for residential development. Refer to comments A3 & A4.

More specifically, these two deputations propose an alternative land release strategy to that recommended by the LGMS. In short, it recommends a staged approach whereby both Gulmarrad (part) and James Creek (part) are recommended for initial rezoning, the specific sites proposed for initial release being those subject of specific planning proposals at the corner of Sheehans Lane and Brooms Head Road (Lanai) and at James Creek (Kahuna No.1). All other lands within the MNCRS's growth areas are suggested for identification as stage 2 release, presumably following a yet to be defined threshold is met in the priority 1 areas. Fundamental to this is the presumption that the developers of the two initial release areas will jointly fund key infrastructure. It has been suggested that alternative funding mechanisms could be used to address increased operational costs arising from under utilisation of resources (i.e. build own & operate until a critical threshold of development is reached).

The suggested approach includes removing a part of the recommended Gulmarrad release from stage 1. The nett effect of this suggestion is that the two "Priority 1" areas would allow for about 1,000 dwellings. The "Priority 2" areas would enable an additional 450 dwellings (approx), leaving a total yield in the order of 1400-1500 dwellings. This is about double the (approx) yield recommended by the LGMS and would require a significant increase in demand over historical dwelling rates. The two "Priority 1" areas alone represent about a 33% increase in the yield recommended by the LGMS. The yield recommended by the LGMS represents about a 50% increase in dwelling rates achieved over the past five years. The risks of over supply under the proposed scenario need to be weighed against the shared infrastructure costs and potential to "capture" demand from elsewhere (i.e. supply led demand). The LGMS has adopted a precautionary approach in this regard with a five year review to assess the impact of development of a new housing choice at Gulmarrad on market forces.

Reduction of the area at Gulmarrad is not supported by the LGMS on the basis of reduction in critical mass.

4. David Pickering

Requests rezoning of his land on Gardiners Road to residential. Land is within the growth area mapping under the MNCRS and therefore is suitable for residential development. Market forces should determine the rate of development.

Comments at A1, A3 & A4 are relevant. The LGMS does not recommend rezoning at this stage. This land is at the southern end of the James Creek area as defined by the growth are mapping and would be difficult to connect with the residential core within the James Creek release area if it proceeded.

OPTIONS

1. Endorse the LGMS, with some amendment, as per the recommendation contained in Item 12.110/11.

Should Council wish to amend the recommended LGMS in accordance with the matters raised through the deputations, there are many other options, and Council will need to articulate their reason and provide a corresponding justification to be inserted into the LGMS document. Some of the options include the following :

2. Amend the LGMS to include Lot 104 DP 751388, James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developer for James Creek for Gardiners Road and James Creek Road upgrading including cycleway. This option would be on the basis of it providing additional housing choice, especially in light of lack of supply at Yamba, and on the basis of developer commitments to providing all infrastructure will enable a more cost effective and timely provision of that infrastructure.

3. Amend the LGMS to include all areas within the MNCRS's growth mapping for residential development, subject to precise areas being determined through a more detailed analysis of constraints in conjunction with site specific planning proposals. This option takes the view that market forces should determine the release of land and assumes that additional supply will attract demand and allow developers sufficient signals to plan development with confidence.

4. Include lands in Gulmarrad on the west of Sheehans Lane within the proposed residential area, subject to precise areas being determined through a more detailed analysis of constraints in conjunction with site specific planning proposals. This option would be based on maximising the yield in Gulmarrad to enhance the provision of services.

5. Remove "Bricknell's Land" from the Gulmarrad release area. This would be on the basis of DECCW's concerns over existing vegetation on the site, and as a trade-off against the inclusion of others areas, such as to the west of Sheehan's Lane (Option 4 above) or at James Creek (Option 2 above).

Any other options should clearly articulate the basis for that amendment.

Option 1, to endorse the LGMS in accordance with the recommendation to the Committee is preferred.

Should Council choose another option, Option 2 would be preferred subject to adequate arrangements for infrastructure financing being made. Options 3 and 4 represent a significant increase in the land supply as compared to the dwelling targets under the MNCRS and hence, Council would need to provide a strong argument to the Department of Infrastructure and Planning when seeking the required endorsement of the Director-General to the LGMS.

FINANCIAL IMPLICATIONS

No direct financial implications to Council however, in the long term, inefficient settlement patterns lead to direct and indirect costs which are difficult to quantify at this stage.

Des Schroder
DEPUTY GENERAL MANAGER – ENVIRONMENTAL & ECONOMIC

Prepared by: David Morrison
Section: Strategic & Economic Planning
Attachments:
1. Submission by Wendy Shepherd on behalf of Skinner
2. Submission by Wendy Shepherd on behalf of Kahuna re LGMS
3. Submission by Wendy Shepherd on behalf of Kahuna re Planning Proposal for Lot 104 DP 751388, James Creek

clarence valley
COUNCIL

NOTICE OF RESCISSION

We, the undersigned, give Notice of Rescission of Council's resolution of
21 July 2011
Minute Number ..... in respect of the Item: 12.110/11 Maclean Urban Catchment Local Growth Management Strategy

reading as follows:-

1 That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of the report 12.110/11, and further amend the strategy to include Lot 104 DP 751388, James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developer for James Creek for Gardiners Road and James Creek upgrading including cycle way, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environment Plan.

2 That the Strategy be reviewed in five years at which time addition to the urban growth areas west of Sheehans lane and north of James Creek Road, referred to as priority 2 area, be reconsidered

Schedule of Recommended Amendments

Draft
Maclean Urban Catchment
Local Growth Management Strategy

Recommended Changes following exhibition

LGMS Reference	*Recommended Change*	*Reference*
Section 3.2 Page 11	***Add the following to the end of paragraph 3 in Section 3.2, James Creek :*** ***"The LGMS not support the rezoning of the James Creek growth area at this stage but this position should be reviewed in 5 years in light of housing demand and progress in the development of other areas identified by the LGMS."***	*Submission P2.1*
Section 1.2 Pages 42-43	***Add the following at the end of paragraph 8 :*** ***"There are two activated development consents over two land parcels at the corner of Brooms Head Road and Sheehans Lane, for 65 and 43 rural residential lots respectively, which include clearing. It is likely that these sites would be developed under those consents in the absence of, or possibly notwithstanding this Strategy. That outcome is considered to be significantly adverse compared to the overall direction of the recommended Strategy to more efficiently utilise land within the existing urban area defined by the rural residential zonings.***	*Submission 8.1*
Section 2.3 Page 6	***Under The Natural Environment" replace "sacrifice" with "compromise".***	*Submission 9.2*
Illustration	*Amend Illustration 7.3, Indicative Structure Plan, to*	*Submission 11.4*

7.3 And Section 7.2 page 28	*delete the reference to "area to be revegetated".* *Amend the LGMS not to require a revegetated buffer west of Sheehans Lane, with appropriate commentary and amendment to the document. (Section 7.2 and Illustration 7.3), however require suitable planting and treatment at the Sheehans Lane frontage of the proposed residential area in association with a development application.* *Delete the following statement from Section 7.2* *"Land to the west of Sheehans Lane should be zoned for environmental protection and densely planted as an offset for biodiversity impacts with clearing of the larger site."*	*General comments*
Illustration 3.1 Page13	*Amend Illustration 3.1 reflect the following population estimates for James Creek, as follows :* *"Existing population 100* *Future population 220"*	*Submission 18.4*
Section 7.2	*The following be added to Section 7.2 :* *"Residential development in Gulmarrad will be required to maintain the vegetation retention obligations, in total, under existing commenced development consents. The development application process will explore potential to provide connectivity between any such areas. "*	*Submission A3.3*
Section 3.3, page 12	*The LGMS include the following recommendations at page xii (Executive Summary) and at Section 3.3, page 12 :* 3. *Developer contributions being required for future sealing of McIntyres Lane and Cameron Jubilee/Street intersection* 4. *Upgrading of the Cameron/Jubilee Street intersection to occur upon the threshold of development identified in the Cardno Eppell Olsen additional traffic report, June 2011* 5. *Development consents only be granted to a combined total of the projected 2021 yield until such time as the Highway or identified intersections are upgraded* 6. *Development contributions for local traffic upgrades as above made obsolete by the Highway upgrade be redirected towards other local traffic facilities in the catchment* *An appropriate paragraph be inserted to summarise the additional traffic assessment.*	*Submission A2.1*
Illustration 1.1 Locality Plan	*Specify that the "proposed employment area" and "proposed urban area" are as defined by the Mid North Coast Regional Strategy, 2009, for further investigation.*	*Staff comment, for clarity*
Pages 16, 34, 38,42, 43	*Various typing/grammatical changes – no change to meaning*	*Staff comment, for accuracy*
Illustration 7.3	*Amend to delete Collector Street connection to Brooms Head Road, and to delete existing developed rural residential land from the south east portion of the proposed residential area*	*Staff comment, reflects conceptual design for the area and acknowledges*

		existing development
New Appendix C1	*Insert the additional Cardno Eppell Olsen traffic assessment as Appendix C1.*	

Voting recorded as follows:
For: *Councillors Williamson, Comben, Dinham, Howe, Hughes, McKenna, Simmons, Tiley and Toms*
Against: *Nil*

NOTICE OF MOTION

We propose to move the following Motion if the above mentioned Resolution is rescinded:-

i) That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of the report 12.110/11, and further amend the strategy to include Lot 104 DP 751388 and Lot 1 DP 1025045 James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developers for James Creek for Gardiners Road and James Creek Road upgrading including cycle way, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environment Plan.

ii) That the Strategy be reviewed in five years at which time addition to the urban growth areas west of Sheehans lane and north of James Creek Road. referred to as priority 2 area, be reconsidered.

Signed: ..... Clr Ian Dinham

Signed: ..... Clr James Simmons

Signed: ..... Clr Karen Toms

Date: 21 July 2011

Office Use Only:
Date Received by General Manager: .....
Referred to Council Meeting on .....
File No: DWS .....

clarence valley
COUNCIL

NOTICE OF RESCISSION

We, the undersigned, give Notice of Rescission of Council's resolution of...
21 July 2011
Minute Number ..... in respect of the Item: 12.110/11 Maclean Urban Catchment Local Growth Management Strategy
reading as follows:-

1. That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of the report 12.110/11, and further amend the strategy to include Lot 104 DP 751388, James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developer for James Creek for Gardiners Road and James Creek upgrading including cycle way, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environment Plan.

2. That the Strategy be reviewed in five years at which time addition to the urban growth areas west of Sheehans lane and north of James Creek Road, referred to as priority 2 area, be reconsidered.

NOTICE OF MOTION

We propose to move the following Motion if the above mentioned Resolution is rescinded:-

That Council endorse the Maclean Urban Catchment Local Growth Management Strategy, as amended by the "Schedule of Recommended Amendments" at the end of the report 12.110/11, and further amend the strategy to include Lot 104 DP 751388 and Lot 1 DP 1025045 James Creek for residential development subject to adequate arrangements being made by developers in both James Creek and Gulmarrad to share the upgrading costs of the Woodford Island Treatment Plant, and by the developers for James Creek for Gardiners Road and James Creek Road upgrading including cycle way, and seek the Director-General, Department of Planning and Infrastructure's endorsement as a residential Strategy under the North Coast Regional Environment Plan.

3. That the Strategy be reviewed in five years at which time addition to the urban growth areas west of Sheehans lane and north of James Creek Road, referred to as priority 2 area, be reconsidered.

Signed: ..... Clr Ian Dinham

Signed: ..... Clr James Simmons

Signed: ..... Clr Karen Toms

Date: 21 July 2011

Office Use Only:
Date Received by General Manager: .....
Referred to Council Meeting on .....
File No: DWS .....

Figure 2 A topograhical map showing the location of the land.

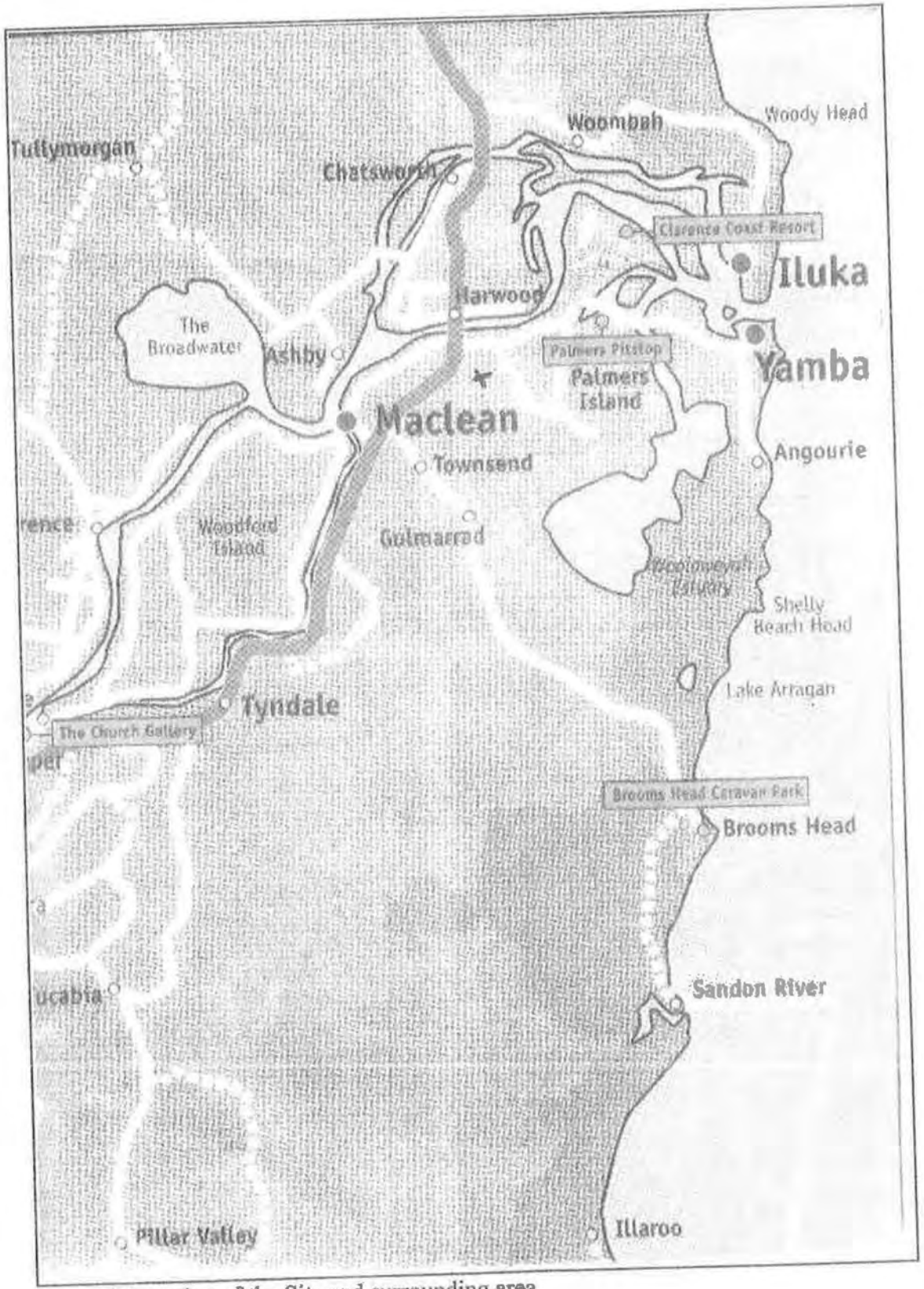

Figure 3 Location of the Site and surrounding area.

ANNEXURE F

JAMES WARREN & Associates Pty Ltd

SEPP 44 ASSESSMENT

JAMES CREEK ROAD, YAMBA

DECEMBER 2010

A REPORT TO HARRISON SHEPHERD PTY LTD

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Suite 28 Cathedral Village
155 Wickham Street
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Fax: (02) 6681 1659

Sunshine Coast Office
PH: (07) 5437 0277
Fax: (07) 5437 0922

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background

James Warren and Associates (JWA) have been engaged by Harrison Shepherd Pty Ltd to address State Environmental Planning Policy No 44 - Koala Habitat Protection for land at James Creek Road, Yamba.

In response to the state-wide decline of Koala populations the Department of Planning has enacted SEPP - 44 Koala Habitat Protection. The Policy aims to "encourage the proper conservation and management of area of natural vegetation that provide habitat for Koalas, to ensure permanent free-living populations over their present range and to reverse the current trend of population decline." If a SEPP 44 Assessment identifies core Koala habitat on a site, a Plan of Management is required to be prepared.

This report aims to determine if core Koala habitat occurs on the subject site and if a Koala Plan of Management is required in accordance with SEPP 44 - Koala Habitat Protection.

1.2 The Subject site

The Subject site consists of land described as Lot 1 DP 1025045, Lot 8 DP 836244, Lots 10 & 11 DP 830112, and Lot 104 DP 751388. The site is located at James Creek Road, Yamba.

The site is borderd by agricultural land to the north, east and south, and agricultural and residential land to the west. An aerial photograph of the subject site is attached as **APPENDIX 1.**

2 METHODOLOGY

2.1 Desktop assessment

A search of the DECCW database was completed on the 16th December 2010 to find records of the Koala within 10km of the Subject site.

The Clarence Valley branch of the Wildlife Information Rescue and Education Service Inc (WIRES) were also contacted to determine if any records exist from the locality of the subject site.

2.2 Site assessment

The subject site was surveyed to determine the presence of suitable Koala habitat and to record evidence of Koala activity. One scientist completed the assessment utilising the following methodology:

- Habitat assessment - the entire subject site was traversed on foot and the locations of Schedule 2 Koala food tree species noted and mapped;
- Scat searches - during traverses of the subject site scat searches were completed under randomly selected Schedule 2 Koala food tree species. A minimum of 2 minutes per tree was spent investigating a search area which radiated 1 m from the base of the trunk. Approximately 50% of the total Schedule 2 Koala food trees on the site were searched.
- Diurnal surveys - during traverses of the subject site Schedule 2 Koala food trees were searched for the presence of Koalas utilising binoculars.
- Spotlighting surveys - nocturnal searches for the presence of Koalas were completed on two (2) consecutive nights (i.e. 14th & 15th October). A total of five (5) hours of spotlighting was completed.
- Call playback surveys - call playback surveys were completed on two (2) consecutive nights (i.e. 14th & 15th October). Pre-recorded Koala calls were broadcast, and then followed by a five (5) minute listening period.

3 RESULTS

3.1 Desktop assessment

The DECCW database contained one hundred and nineteen (119) records of this species within 10 kilometres of the subject site and one thousand, five hundred and sixty-four (1,564) sightings in the Clarence Valley LGA.

The two (2) closest recorded sightings of Koala's are approximately 3 and 3.5 kilometres respectively from the Subject site, in a south-westerly direction, near Gullmarad (**APPENDIX 2**).

Clarence Valley WIRES were not aware of any Koala rescues of incidents from the James Creek Area.

3.2 Site assessment

Three (3) species of Schedule 2 Koala food trees were observed on the subject site:

- Scribbly gum (*Eucalyptus racemosa*);
- Forest red gum (*E. tereticornis*); and
- Tallowwood (*E. microcorys*).

The most common of these was the Scribbly gum which was the dominant species in a Dry sclerophyll forest community in the south-western corner of the site (**APPENDIX 3**).

Forest red gum forms a woodland community and also occurs as isolated paddock trees along the western boundary of the subject site and within the adjoining road reserve. There are also some scattered occurrences in the central southern portion of the site (**APPENDIX 3**).

Tallowwood occurs as isolated individuals within the central southern and north-eastern portions of the site (**APPENDIX 3**).

No Koalas were observed on the subject site. No Koalas responded to call playback. Old scats, estimated to be at least 4 weeks old, were recorded from three (3) locations in the north-western portion of the subject site (**APPENDIX 3**).

4 SEPP 44 KOALA HABITAT ASSESSMENT

State Environmental Planning Policy No. 44 - Koala Habitat Protection commenced on 13 February 1995. This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:

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

(b) By encouraging the identification of areas of core koala habitat, and

(c) By encouraging the inclusion of areas of core koala habitat in environment protection zones.

A number of criteria in the SEPP are to be considered during an assessment of potential Koala habitat. The assessment is in the form of numerous questions with yes or no answers. If the answer to a question is yes, the assessor is required to proceed to the next question. If the answer to a question is no, the assessor is not required to proceed any further.

1. Does the policy apply?

Does the subject land occur in an LGA identified in Schedule 1?

The subject site occurs in the Clarence Valley LGA, which is listed under Schedule 1.

Is the landholding to which the DA applies greater than 1 hectare in area?

Yes.

2. Is the land potential Koala habitat?

Does the site contain areas of native vegetation where the trees of types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component?

Possibly. The exact number and location of trees listed under Schedule 2 which occur on the subject site has been determined. Although the percentage of Koala food trees on the subject site was not quantitatively assessed, **APPENDIX 3** indicates that the total number of Koala food trees may potentially exceed fifteen percent of the total trees present.

3. Is there core Koala habitat on the subject land?

Under SEPP 44 core Koala habitat is defined as 'an area of land with a resident population of Koalas, evidenced by attributes such as breeding females (that is females with young) and recent sightings of and historical records of a population'.

No. Whilst evidence of Koala activity was recorded from a small number of locations on the subject site (i.e. scats), no evidence of a 'resident population' exists for the site. It is possible that Koalas may occasionally utilise the site as they disperse through the locality however DECCW records, information from WIRES and the results of the site surveys all suggest that core Koala habitat does not occur in the locality.

4. Is there a requirement for the preparation of a Plan of Management for identified core Koala habitat?

Whilst Schedule 2 Koala food tree species may constitute 15% of the trees on the site, and some evidence of Koala activity was recorded (i.e. a small number of scats), the subject site is not considered to contain a resident population of Koalas or core Koala habitat as defined under SEPP 44. A Koala Plan of Management is subsequently not required to be prepared.

5 SUMMARY & CONCLUSION

James Warren & Associates have been engaged by Harrison Shepherd Pty. Ltd. to prepare a SEPP 44 Assessment for land described as Lot 1 DP 1025045, Lot 8 DP 836244, Lots 10 & 11 DP 830112, and Lot 104 DP 751388. The site is located at James Creek Road, Yamba.

The assessment of State Environmental Planning Policy No. 44 has determined that neither a resident population, nor core Koala habitat as defined by SEPP 44 occurs on the subject site and thus there is no requirement for the preparation of a Koala Plan of Management.

ANNEXURE 'G'

CONTAMINATED LAND ASSESSMENT

FOR A PROPOSED REZONING

AT

LOT 104 DP 751388

JAMES CREEK ROAD, JAMES CREEK, NSW

A preliminary assessment of possible soil contamination as required for State Environmental Planning Policy 55

PREPARED BY: Nick Davison, Troy Shepherd and Kim Tuart-Haynes
EAL Consulting Service
in conjunction with the Environmental Analysis Laboratory,
Southern Cross University
A.B.N. 41 995 651 524

For: Harrison Shepherd Pty. Ltd.
Report No.: EAL11079.001
Date: 13th April 2011

EAL Consulting Service
Southern Cross University
Military Road
EAST LISMORE 2480 NSW
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W: www.scu.edu.au/eal

Southern Cross UNIVERSITY
A new way to think

Disclaimer

The Environmental Analysis Laboratory (EAL) as part of Southern Cross University has conducted work concerning the environmental status of the site, which is the subject of this report, and has prepared this report on the basis of that assessment.

The work was conducted, and the report has been prepared, in response to specific instructions from the client or a representative of the client to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to EAL. The analysis, evaluations, opinions and conclusions presented in this report are based on that information, and they could change if the information is in fact inaccurate or incomplete.

While due care was taken during field survey and report preparation, EAL accepts no responsibility for any omissions that may have occurred due to the nature of the survey methodology. EAL has made no allowance to update this report and has not taken into account events occurring after the time its assessment was conducted.

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

This report is intended for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only to the client unless otherwise noted in the report. Any third party who relies on this report or on any representation contained in it does so at their own risk.

TABLE OF CONTENTS

TRUNK RISING MAIN AND PUMP STATIONS

The route of the trunk rising main will need detailed investigation and design. There are three apparent routes including :-

1. To the Townsend treatment works generally via Gardiners Road, Jubilee Street, and Schwonbeg Street. A length of approximately 4.5 km.

2. To the Maclean treatment works generally via James Creek Road, Yamba Road, Farlows Lane, and an un-named road. Approximately 6.0 km in length.

3. To the Maclean treatment works in a more direct route from the northern end of the James Creek Area to the Pacific Highway, then along the Highway alignment to an un-named road, Farlows Lane and another un-named road. Approximately 4.5 km.

Option 1 has the advantage of using an existing road, equal shortest distance, and power available along the route for the pump stations. Option 2 is the longest option, however again it has a road corridor and power available. Option 3 has the disadvantages of creek and highway crossings and the unknown status of the corridors.

Based on Option 1, the PWWF and 4 pump stations along the rising main route, the size of the rising main required would be in the order of 225 mm diameter. Although this size rising main would give acceptable storage times and flow velocities in the fully developed condition, i.e. with the full design flow being conveyed, there is likely to be problems in the initial stages when only small flows are being produced.

It is likely that a staged system is required with a smaller initial rising main being provided and an additional rising main being constructed when the development has progressed sufficiently. The pump stations could be initially constructed to provide sufficient capacity for the fully developed state, however the pumps would need to be upgraded to meet the higher flows.

The staged construction of the trunk rising main would initially require a rising main size in the order of 150 mm diameter. A second rising main in the order of 200 mm diameter would be required for the fully developed state.

The size of the rising main, pumps and pump stations could be reduced significantly if a storage tank or pond is provided to store peaks in the flows. The stored sewage would then be pumped at a controlled rate. The storage pond could also be used to aerate or pre-treat the sewage. The reduction in the pump sizes would also reduce the running costs of the system.

COST OF TRUNK RISING MAIN AND PUMP STATIONS

The cost to provide the four pump stations and a 150 mm diameter rising main has been estimated at $2,000,000. The cost to install the additional 200 mm diameter rising main would be in the order of $1,000,000 and the cost to upgrade the pumps would be approximately $250,000

This gives an overall cost in the order of $3,250,000 or approximately $1550 per lot

The cost of the internal reticulation within the subdivisions will for part of the normal development works and the cost will be met by the developers.

TREATMENT WORKS

The capacities of the existing treatment facilities and the capacity of the proposed new facility at Woodford Island, together with the transfer system from the existing treatment works to Woodford Island, will need to be examined to determine the extent of upgrading works required. We understand that the design of the new facility at Woodford Island is currently being undertaken and it may be possible that the additional lots generated could be taken into account in the design phase.

CONCLUSION

The provision of a reticulated sewer system to the James Creek Area could be achieved with the use of conventional pump stations and rising mains. The cost to provide the system is reasonable and well within economic constraints.

Signed

Mark Burridge
MIE Aust CPEng
For McKenzie Burridge & Associates Pty Ltd

03068 ANNEXURE 'C'

Reference: DMU2008/0130 CVC:306246
Contact: Dave Morrison: DB

clarence valley COUNCIL

ALL CORRESPONDENCE TO BE ADDRESSED TO:
The General Manager
Locked Bag 23
GRAFTON NSW 2460

CUSTOMER SERVICE CENTRES:
Grafton Office
Maclean Office

CONTACT DETAILS

25 September 2008.

W Shepherd
PO Box 397
YAMBA NSW 2464

Development Management Unit Deputation

DMU Number:	DMU2008/0130
Development Proposal:	Rezoning from Rural to Rural Residential or Residential
Property Address:	James Creek Road JAMES CREEK NSW 2463
Legal Description:	Lot 104 DP 751388

Attached is a meeting record of your deputation on 16 September 2008 to Council's Development Management Unit.

If you believe any aspect of these Minutes is incorrect or any matter discussed has not been included, please advise Council in writing.

Note that where development is permissible with consent this does not necessarily mean that a development application will be approved. As outlined at the DMU Meeting, there is a range of information which you will need to submit with your application. Council will assess any application under the requirements of the Environmental Planning and Assessment Act 1979. As a result of that assessment a determination of the application will be made which could be:

- Approval;
- Approval with conditions; or
- Refusal.

If you require further information please contact David Morrison of Council's Environmental and Economic Services on (02) 6643 0200 between 8.30 am and 11.00 am.

Yours faithfully

David Morrison
Manager Strategic Planning

ABN: 85 864 095 684

Development Management Unit Meeting Minutes

Date:	16 September 2008
Time:	10am
Customer:	W Shepherd
Present:	Clem Rhoden, Dave Morrison, Bob Burness & Kerry Harre
Property Address:	James Creek Road JAMES CREEK NSW 2463
Legal Description:	Lot 104 DP 751388
Zoning:	1(a) Rural (Agricultural Protection) Maclean LEP
Development Proposal:	DMU Subdivision
File:	
Receipt No:	368543

Important Note:
These minutes are the professional opinion of the Council Officers attending this meeting, in specific reference to this site, and the proposal and plans presented at this meeting only. A site inspection has not been undertaken, and as such, site and locality specific constraints may exist that could affect the development potential of the allotment as discussed herein.

Should an application require notification and/or advertising, any submission received must be given due consideration and may alter what is/is not considered acceptable.

Should an application require referral to a Council meeting for determination, the professional opinions expressed in these minutes may/may not be supported by Council.

In the event that Council policy or a relevant DCP is amended, or the proposal or plans changed by the client, the professional opinions expressed in these minutes may no longer be applicable. In these circumstances, the client is advised to seek current advice from Council.

The proposal is for Rezoning of Lot 104 DP 751388 from Rural 1(a) to Rural Residential or Residential.

Planning Considerations:

Permissibility Requires rezoning.

DCPs Applicable: Clarence Valley Council DCP – Development in Rural-Residential Zones

The James Creek area was identified in the Growth Area Maps associated with the still draft Mid North Coast Regional Strategy as being an area that may, subject to further investigation, be suitable for future residential development. The draft Strategy requires that Council prepare a Local Growth Management Strategy to further investigate relevant planning issues prior to rezoning. The Growth Area Mapping under the draft Strategy indicated that development in the James Creek area may be dependant upon actual demand and may be influenced by the earlier development of other area such as at Gulmarrad and/or West Yamba, or by the accuracy of the demand projections of the draft Strategy. The Local Growth Management Strategy would be required to specifically address those issues through a staging plan. It should be noted that at this stage, the draft Mid North Coast Regional Strategy has not been adopted by the State Government.

Specific issues that need to be addressed, through the Local Growth Management Strategy include servicing, especially sewerage and the ability to transport sewerage to the Woodford Island Sewage Treatment Plant, traffic through a review of the 1999 traffic study for Gulmarrad, possible site contamination from prior cane production, and drainage. The Department of Planning's Settlement Planning Guidelines, 2007 provides additional matters for consideration.

Council's Strategic Planning Section is of the view that consideration of rezoning of this land should follow the Government's adoption of the Draft Mid North Coast Regional Strategy and then, if the area is included in the adopted Local Growth Area Maps, the preparation of the required Local Growth Management Strategy. This process is likely to take in the order of two years, depending on the State Government's decision making timelines and the complexity of planning issues that arise.

A formal application to rezone the land in advance of that process would need to address the same issues, the relevant SEPPs and REPs and Section 117 Directions, and the sustainability principles contained in the draft Mid North Coast Regional Strategy. To proceed, such application would require Council's support and that of the State Government's LEP Review Panel. Compelling justification would be needed to justify proceeding in advance of the process envisaged under the draft Regional Strategy for Council's Strategic Planning Section to support the application at this stage.

Clearing Controls

Any clearing of vegetation, including clearing for asset protection and access, may require approval from the Catchment Management Authority. The applicant is advised to undertake a "self assessment" using Catchment Management Authority self assessment forms. If Catchment Management Authority approval is required the applicant is advised to either seek that approval prior to lodging the application with Council or book another DMU where a representative of the Catchment Management Authority can be in attendance.

ANNEXURE 'D'

JAMES WARREN & Associates Pty Ltd

ECOLOGICAL CONSULTANTS

FLORA AND FAUNA ASSESSMENT

LOT 104 DP 751388

JAMES CREEK ROAD
JAMES CREEK

AUGUST 2009

A REPORT PREPARED FOR
Harrison Shepherd Pty Ltd

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SUNSHINE COAST OFFICE

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Fax: (07) 5437 0922
sunshine@jwarren.com.au

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background

James Warren and Associates (JWA) have been engaged by Harrison Shepherd Pty Ltd to complete a Flora and Fauna Assessment of Lot 104 DP751388 at James Creek Road, James Creek, NSW.

The assessment has involved the following:

- Mapping and ground truthing vegetation units and determining their conservation status;
- Searching for and recording Threatened (*TSC Act 1995*) and ROTAP (Briggs & Leigh 1996);
- Determining the suite of Threatened fauna (*TSC Act 1995*) that occurs in the locality;
- Assessing habitat provided by the site in relation to adjacent habitat and making an assessment of the corridor value of the site;
- Addressing statutory requirements including *State Environmental Planning Policy No. 44* (SEPP 44 - Koala Habitat Protection), Section 5A of the *Environmental Planning & Assessment Act (1979)* (EPA Act) and the Commonwealth *Environment Protection and Biodiversity Act 1999* (EPBC Act).

1.2 Locality

1.2.1 Introduction

The Locality is defined as the area within a 10km radius of the subject site. The Locality therefore extends from Yamba in the east to Maclean in the west, Yamba road in the north and Austens Lane in the south (**FIGURE 1**).

Prominent features in the locality include the Towns of Yamba and Maclean. Prominent water bodies in the locality include the Clarence Rivers, Wooloweyah Lagoon and numerous other creeks and tributaries.

Dominant habitat types are Sclerophyllous forest, Riparian forest, and Riverine communities. Land uses within the area include forestry, agriculture, tourism, grazing and residential.

There are two (2) dedicated conservation reserves in the locality:

- Bundjalung National Park, situated on the coast to the north of Iluka and south of Evans Head, covering an area of approximately 17,000 hectares and situated 15 km to the north-east of the subject site;
- Yuraygir National Park, situated to the south of Yamba and north of Red rock, covering 60 km of coastline and situated 10km south-east of the subject site.

A State Wetland (SEPP 14) occurs approximately 200m to the west of the subject site **(FIGURE 2).**

1.2.2 The Subject Site

The subject site consists of land described as Lot 104, DP 751388 and covers approximately 32.91 hectares. The site is situated between Yamba (east) and Maclean (west), Yamba Road and the Clarence River (north) and Austens Lane (south).

A patch of remnant eucalyptus forest occurs to the immediate north of the property and small rural holdings to the south **(FIGURE 3).**

1.2.3 The Area of Interest

The area of interest includes Lot 104, DP 751388 and adjoining roadside vegetation along Austens Lane **(FIGURE 4).**

1.3 Landuse Zones

The subject site is zoned 1(a) Rural (agricultural protection) according to the Maclean Local Environment plan (LEP) 2001 **(FIGURE 5).**

1.4 The Proposed Development

The development proposes to rezone Lot 104 from 1(a) rural (agriculture protection) to 1(s) rural small holdings.

2 FLORA ASSESSMENT

2.1 Introduction

This section discusses the methods used in the vegetation assessment and presents the results of the assessment.

2.2 Methods

2.2.1 NPWS Database Search

Searches of the NPWS (DECC 2008a) and DEWHA (EPBC 2008) databases were completed (May 2008) to find records of State and Commonwealth Threatened species[1] within 10km of the subject site.

2.2.2 Site Survey

A survey was completed on the 3rd August 2009 by one (1) scientist utilising random meander searches (Cropper 1993). A total of twp (2) hours flora survey was undertaken. A plant species list was compiled.

Mapping, of vegetation communities, was undertaken using 1:1000 (2005) aerial photography, GPS and cadastral bases with relevant survey points.

2.3 Results

2.3.1 NPWS Database Search

A search of the NPWS (DECC 2008) and DEWHA (EPBC 2008) databases revealed a total of eleven (11) Threatened Flora species within 10km of the subject site **(TABLE 1)**.

TABLE 1
NPWS DATABASE RECORDS OF THREATENED FLORA SPECIES WITHIN 10 KM OF THE SUBJECT SITE

Common name	Botanical name	TSC	EPBC
Basket Fern	*Drynaria rigidula*	✓	
Clear Milkvine	*Marsdenia longiloba*		✓
Heath Wrinklewort	*Rutidosis heterogama*		✓
Knotweed	*Persicaria elatior*		✓
Leafless Tongue-orchid	*Cryptostylis hunteriana*		✓
Marbled Balogia	*Baloghia marmorata*		✓
Minute Orchid	*Taeniophyllum muelleri*		✓
Rough-shelled Bush Nut	*Macadamia tetraphylla*	✓	
Scented Acronychia	*Acronychia littoralis*		✓
Stinking Cryptocarya	*Cryptocarya foetida*		✓
Sweet Myrtle	*Gossia fragrantissima*		✓

2.3.2 Site Survey

The survey recorded the following:

- Two (2) vegetation communities (Section 2.3.3; **FIGURE 6**);
- Forty-one (41) flora species **(APPENDIX 1)**; and

[1] As listed within schedules of the *TSC Act (1995)* and *EPBC Act (1999)*.

- No Threatened flora species.

2.3.3 Community Descriptions

The two (2) vegetation communities are summarised and described below **(TABLE 2; FIGURE 4).**

TABLE 2
VEGETATION COMMUNITIES PRESENT ON THE SUBJECT SITE

1	Low closed/open forest
2	Closed grassland

2.3.3.1 Community 1 - Low closed/open forest (mixed species)

Location and area

Community 1 forms a narrow strip, alongside Austens Lane, from the property boundary to the gravel Road. A strip also extend northward, from Austens Lane, into the Lot probably following the path of an old fence line.

Description

This community is dominated by Early black wattle (*Acacia leiocalyx*) with a significant presence of Black she-oak (*Allocasuarina littoralis*), Red ash (*Alphitonia excelsa) and* Swamp turpentine (*Lophostemon suaveolens*). The mid-storey contains regenerating canopy species and lantana. The groundcover includes native grasses, Bracken fern, Hairy Pea Bush (*Pultenaea villosa*) and Variable sawsedge (*Lepidosperma laterale*). There is a considerable amount of leaf litter from the Black she-oaks covering the ground.

This community may have been planted.

Conservation status

The conservation status of Community 1 is considered to be low.

2.3.3.2 Community 2 - Closed grassland

Location and area

Community 2 occupies most of the subject site (≈99%).

Description

The area consists of a combination of a variety of native and exotic grasses and weeds such as Blue billygoat weed, Brazilian fire weed and Stinking roger. There is also some regeneration of wattle and Black she oak. The area was previously used for cropping and/or grazing but is now unfenced and has an average vegetation height of approximately 1m.

Conservation status

The Conservation status of this community is considered to be low.

3 FAUNA ASSESSMENT

3.1 Introduction

This section includes a description of the methods used in determining which fauna species use the Study area and a discussion of the results.

3.2 Methods

3.2.1 NPWS Database Search

A search of the NPWS database (DECC 2009a) was conducted to find records of Threatened fauna species within 10km of the subject site.

3.2.2 Literature Review

A comprehensive literature review was completed using a number of sources to identify records of Threatened species in the locality.

3.2.3 Habitat Assessment

Site habitats were assessed to determine their value for native fauna species. This assessment was completed in conjunction with the flora survey. The assessment focused on identifying habitat features associated with Threatened species as well as other native fauna groups. Particular attention was paid to habitat features such as:

- Mature trees with hollows, fissures and/or other suitable roosting/nesting places;
- Koala food trees;
- Preferred Glossy black cockatoo feed trees (Forest oak and/or Black she-oak);
- Yellow-bellied glider feeding scars;
- Condition, flow and water quality of drainage lines and bodies of water;
- Dense vegetation;
- Hollow logs/debris and areas of dense leaf litter;
- Fruiting flora;
- Blossoming flora and particularly winter-flowering species;
- Vegetation connectivity and proximity to neighbouring areas of intact vegetation; and
- Caves and man-made structures suitable as microchiropteran bat roost sites.

3.2.4 Fauna Survey

3.2.4.1 Introduction

A brief fauna survey was carried out in conjunction with the flora survey by one (1) scientists on the 3rd August 2009. The weather was generally fine and warm during the survey period. The following survey technique was utilised in this assessment.

Opportunistic Sightings

The 'random meander' technique was used to traverse the site. All incidental records of fauna utilising the study area were recorded. Scats, bones and diggings were searched for and bird activity was noted.

3.3 Results and Discussion

3.3.1 NPWS Database Search

A search of the NPWS (DECC 2008; and DEWHA (EPBC 2008) databases revealed a total of twenty six (26) Threatened fauna species within 10km of the subject site (TABLE 3).

TABLE 3
NPWS DATABASE RECORDS OF THREATENED FAUNA SPECIES WITHIN 10 KM OF THE SUBJECT SITE

Common name	Scientific name	TSCA	EPBC
Australian Painted Snipe	*Rostratula australis*		✓
Barred Cuckoo-shrike	*Coracina lineata*	✓	
Black-breasted Button-quail	Turnix melanogaster		✓
Black-necked Stork	*Ephippiorhynchus asiaticus*	✓	
Brolga	*Grus rubicunda*	✓	
Eastern Ground Parrot	*Pezoporus wallicus wallicus*	✓	
Emu population in the New South Wales North Coast Bioregion and Port Stehens local government area	*Dromaius novaehollandiae*	✓	
Grass Owl	*Tyto capensis*	✓	
Green and Golden Bell Frog	*Litoria aurea*	✓	✓
Grey-crowned Babbler (eastern subspecies)	*Pomatostomus temporalis temporalis*	✓	
Grey-headed Flying-fox	*Pteropus poliocephalus*	✓	✓
Koala	*Phascolarctos cinereus*	✓	
Large-footed Myotis	*Myotis adversus*	✓	
Little Bentwing-bat	*Miniopterus australis*	✓	
Little Tern	*Sterna albifrons*	✓	
Masked Owl	*Tyto novaehollandiae*	✓	
Osprey	*Pandion haliaetus*	✓	
Rufous Bettong	*Aepyprymnus rufescens*	✓	
Spotted-tailed Quoll	*Dasyurus maculatus*	✓	
Square-tailed Kite	*Lophoictinia isura*	✓	
Squirrel Glider	*Petaurus norfolcensis*	✓	
Stuttering Frog	*Mixophyes balbus*		✓
Swift Parrot	*Lathamus discolor*		✓
Three-toed Snake-tooth Skink	*Coeranoscincus reticulatus*		✓
Wallum Sedge Frog	*Litoria olongburensis*		✓
Wompoo Fruit-Dove	*Ptilinopus magnificus*	✓	

3.3.2 Habitat Assessment

3.3.2.1 Amphibians

Amphibians occurring in the region are poikilothermic, predominantly insectivorous and generally require free water for reproduction, with the exception of two highland genera (*Assa darlingtoni* and *Philoria* spp.) The habitat requirements of most species are unlikely to be determined by forest cover or floristics, but are more strongly influenced by factors such as climate, distance to water bodies, riparian vegetation, hydrological and morphological characteristics of water bodies and the availability of suitable micro-habitat for aestivation and shelter.

The majority of species that occur within the region lay eggs in or near temporary or permanent water bodies and rely on free water for larval development and metamorphosis. Of these species, only a few are dependent on forested habitats beyond the riparian zone or beyond areas of temporary inundation. These species include the Red-eyed tree frog (*Litoria chloris*), Leseuer's frog (*Litoria leseueri*), Fletcher's frog (*Lechriodus fletcheri*) and the Barred frogs of the *Mixophyes* genus.

The subject site is likely to provide poor quality habitat for frogs.

Grasslands provide suitable habitat for a range of Amphibian species, particularly along drainage depressions and soaks. Species commonly encountered in grassland communities include the Common eastern froglet, Eastern sign bearing froglet, Striped marsh frog, Spotted grass frog, Eastern dwarf tree frog, Rocket frog, Whistling tree frog and Cane toad.

3.3.2.2 Reptiles

As reptiles are poikilothermic, and predominantly insectivorous or carnivorous, their habitat requirements are less directly determined by vegetation species composition than other taxa which feed directly on plants. Reptile distributions are strongly influenced by structural characteristics of the vegetation, climate and other factors affecting thermoregulation such as shade and availability of shelter and basking sites (Smith *et al* 1994).

In a survey of the moist forest herpetofauna of North-eastern NSW, Smith *et al* (1989) found that few species discriminated between rainforest and wet sclerophyll forest, however, most species exhibited a response to differences in elevation and the availability of microhabitat components and other substrates.

The availability of microhabitats, of varying thermal properties is particularly important for most reptile species, as behavioural thermoregulation (regulation of body heat) is important in controlling critical body functions such as digestion, foraging activity and reproduction.

Reptile diversity and abundance is often (but not always) significantly higher in drier habitat types, particularly those with a wide variety of ground substrate microhabitats. This contrasts markedly with the distribution patterns of birds, and most mammals.

The single limiting factor in terms of species diversity in coastal vegetation is the lack of shelter sites (eg. logs, tree hollows and decorticating bark). Such habitat

components characterise eucalypt forests and woodlands, where species diversity may be much higher, depending on disturbance factors.

The subject site and adjacent roadside vegetation, is considered to provide fair quality habitat for reptiles due to the presence of: the combination of shelter and basking sites; forested areas with good canopy and leaf litter development and the availability of water in road side drainage lines (although intermittent).

3.3.2.3 Birds

The significance of near coastal environments of the N.S.W. Far North Coast and South-East Queensland as over-wintering habitat for migratory birds has been established by many observers and bird banders including Keast (1968), Robertson (1973), Gravatt (1974), Porter (1982) and Robertson and Woodall (1983). These patterns may be attributable to the relatively high winter temperatures and long growing season of this region compared with the rest of south-eastern Australia (Fitzpatrick and Nix 1973; Edwards 1979; Nix 1982; Specht *et al* 1981).

Many insectivorous birds from higher latitudes and elevation over-winter in the locality. These include species such as the Fantail cuckoo, Sacred kingfisher, Rainbow bee-eater, Noisy pitta, Tree martin, Black-faced cuckoo-shrike, Cicada bird, Golden whistler, Rufous whistler, Rose robin, Grey fantail, White-throated gerygone, Silvereye, Olive-backed oriole and Spangled drongo.

Birds such as honeyeaters and lorikeets are Blossom nomads (*ibid.*). These birds move locally in response to variation in the availability of nectar and or pollen, important components in their diet. Porter (1982) highlights the importance of Forest red gum, Broad-leaved paperbark and Coast banksia for Scaly-breasted and Rainbow lorikeets as these species flower during the lorikeet's winter breeding period. A sequence of important nectar bearing plants in the genera Eucalyptus, Banksia, Melaleuca and Callistemon provide a continuity of food for nectarivorous birds.

Studies of bird usage in rainforest remnants by Holmes (1987), Connelly and Specht (1988) and Lott & Duigan (1993) indicate that the diversity and abundance of birds is related to the size of the Rainforest patches and their degree of isolation from major areas of native forest. Lott & Duigan (1993) and Howe *et al* (1981) also note that sites with a higher diversity of vegetation and those which are closer to water generally support a greater diversity of birds. Locally nomadic and migratory rainforest species such as the Wompoo, Rose-crowned and Superb fruit-doves, Common koel and Black-faced cuckoo-shrike are known to use scattered areas of habitat as "stepping-stones" between more intact areas of forest (Date *et al* 1992; Lott & Duigan 1993).

The paucity of habitats present in on the subject site is likely to result in a low diversity of resident and nomadic birds. The roadside vegetation and adjacent forested areas does provide good quality habitat and an opportunity for birds to disperse and forage within the subject site.

3.3.2.4 Mammals

Small terrestrial mammals generally occur in highest densities in association with a complex vegetation structure. A dense understorey layer, which provides shelter from predators and provides nesting opportunities, is particularly important.

In general medium-large terrestrial mammals such as macropods select habitats which provide a dense cover for shelter and refuge and open areas for feeding. The larger species tend to occupy drier more open habitats: the smaller species, moister and more densely vegetated habitats.

All Arboreal mammals that occur in the region (with the exception of the Koala) utilise tree hollows for nesting and shelter (although the Common ringtail possum is not dependent on hollows). Smith & Lindenmeyer (1988) consider that shortage of nest hollows is likely to limit arboreal mammal populations where density of hollow bearing trees is less than 2 to 8 trees per hectare.

Arboreal folivores (*e.g.* Common ringtail possum, Greater glider) are widespread and abundant but exhibit local variation in response to such factors as tree species composition, foliage protein and fibre levels, leaf toughness, toxins, forest structure and the availability of shelter sites. Arboreal folivores are expected to be most abundant in areas of high productivity, high soil fertility and moderate climate, in conjunction with adequate shelter and suitable foraging substrate.

Arboreal nectarivore/insectivores feed on a wide variety of plant and insect exudates including the nectar of flowering eucalypts, and shrubs such as Banksia and Acacia sp. These species also feed extensively on insects, particularly under the shedding bark of eucalypts. The distribution of nectarivore/insectivores is considered to be related to the abundance of nectar and pollen producing plants, the abundance of bark shedding eucalypts which harbour insect prey, and the occurrence of sap and gum exudate producing trees (Sap feed trees) and shrubs (*e.g.* Acacia sp.). Arboreal nectarivores and insectivores are generally hollow dependent species.

There is a lack of trees with hollows necessary for hollow-dependent mammals, however, as with the birds, the Study area may represent important forage habitat for hollow-dependent mammals resident in Blackbutt forests in the locality. No primary Koala feed trees were recorded on the subject site.

The lack of structural complexity and habitat diversity of the site is unlikely to support a diversity and abundance of ground dwelling mammals.

3.3.3 Results of Fauna Survey

3.3.3.1 Amphibians

No amphibian species were recorded. The survey was completed in midwinter and during a relatively long dry spell. Amphibian activity could be expected to be low.

3.3.3.2 Reptiles

No reptile species were recorded.

3.3.3.3 Birds

Ten (10) bird species were recorded **(TABLE 4)**.

TABLE 4
BIRD SPECIES RECORDED DURING THE SURVEY

Common name	Scientific name
Torresian crow	*Corvus orru*
Eastern Spinebill	*Acanthorhynchus tenuirostris*
Grey fantail	*Rhipidura fuliginosa*
Galah	*Eolophus roseicapillus*
Pied currawong	*Strepera graculina*
Laughing Kookaburra	*Dacelo novaeguineae*
Magpie	*Gymnorhina tibicen*
Silvereye	*Zosterops lateralis*
Superb Fairy-wren	*Malurus cyaneus*
Willie Wagtail	*Rhipidura leucophrys*

3.3.3.4 Mammals

No mammal species were recorded.

3.3.4 Threatened Species Considered to Possibly Occur

Based on the assessment of habitats, Threatened fauna species known from the locality were assessed for the likelihood of their occurrence.

TABLE 6
LIKELIHOOD OF OCCURRENCE OF THREATENED FAUNA SPECIES

Species	Likelihood of occurrence in the Study area	Notes
Australian Painted Snipe	Unlikely	The Australian Painted Snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum Muehlenbeckia or canegrass or sometimes tea-tree (Melaleuca). The species sometimes utilises areas that are lined with trees, or that have some scattered fallen or washed-up timber (Marchant & Higgins 1993). There is no suitable habitat for this species on the subject site.
Barred cuckoo-shrike	Unlikely	Rainforest, eucalypt forests and woodlands, clearings in secondary growth, swamp woodlands and timber along watercourses. They are usually seen in pairs or small flocks foraging among foliage of trees for insects and fruit. They are active birds, frequently moving from tree to tree.

Species	Likelihood of occurrence in the Study area	Notes
Black-breasted Button-quail	Unlikely	The Black-breasted Button-quail is restricted to rainforests and forests, mostly in areas with 770-1200 mm rainfall per annum (Marchant & Higgins 1993). They prefer drier low closed forests, particularly semi-evergreen vine thicket, low microphyll vine forest, araucarian microphyll vine forest and araucarian notophyll vine forest Marchant & Higgins 1993). There is no suitable habitat for this species on the subject site.
Black-necked stork	**Possible**	The Black-necked stork occurs in swamps, mangroves, mudflats, dry floodplains and irrigated land. Habitat for the Black-necked stork exists on the subject site.
Brolga	**Possible**	Brolgas feed in dry grassland or ploughed paddocks or even desert claypans. They are also dependent on wetlands, especially shallow swamps, where they will forage with their head entirely submerged. They feed using their heavy straight bill as a 'crowbar' to probe the ground or turn it over, primarily on sedge roots and tubers. They will also take large insects, crustaceans, molluscs and frogs. The nest comprises a platform of grasses and sticks, augmented with mud, on an island or in the water. Two eggs are laid from winter to autumn. This species may forage on the subject site but there is no available nesting habitat.
Eastern Ground Parrot	Unlikely	The Ground Parrot occurs in high rainfall coastal and near coastal low heathlands and sedgelands, generally below one metre in height and very dense (up to 90% projected foliage cover). These habitats provide a high abundance and diversity of food, adequate cover and suitable roosting and nesting opportunities for the Ground Parrot, which spends most of its time on or near the ground. There is no suitable habitat for this species on the subject site.
Glossy black cockatoo	**Possible**	Found in coastal forests and open inland woodland in eastern Australia. The Glossy black-cockatoos distribution is limited to habitat which contains sufficient seed reserves of their three favoured species of food trees: *Allocasuarina littoralis*, *A. torulosa* and *A. verticillata* and suitable large hollow bearing trees for nesting. Suitable habitat for Glossy black cockatoo exists in the road side vegetation adjacent to the subjects site.

Species	Likelihood of occurrence in the Study area	Notes
Grass owl	**Possible**	Grass Owls are found in areas of tall grass, including grass tussocks in swampy areas, grassy plains, swampy heath, and cane grass, or sedges on flood plains. They rest by day in a 'form' - a trampled platform in a large tussock or other heavy growth. If disturbed they burst out of cover, flying rather slowly, before dropping straight down again into cover. They also nest in trodden-down grass.
Green and Golden Bell Frog	Unlikely	Inhabits marshes, dams and stream-sides, particularly those containing bullrushes (*Typha* spp.) or spikerushes (*Eleocharis* spp.). Optimum habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (*Gambusia holbrooki*), have a grassy area nearby and diurnal sheltering sites available. There is no suitable habitat for this species on the subject site.
Grey-crowned babbler	**Possible**	Grey-crowned babblers live in open forest and woodland, acacia shrubland and adjoining farmland. Suitable habitat occurs for this species on the site.
Grey-headed flying fox	Unlikely	This species occurs from central eastern Qld south to Victoria. In NSW, they mainly occur in coastal areas and along river valleys. They typically roost in conspicuous camps in lowland rainforest and swamp forest, often in isolated remnants or on islands in rivers. They forage on fruit, nectar and pollen in rainforests and eucalypt forests. Suitable habitat exists on the subject site.
Koala	Unlikely	The preferred Koala feed trees Forest Red gum and Swamp mahogany occur on the subject site. There is no suitable habitat (i.e. Koala food trees) for this species on the subject site.
Large-footed Myotis	Unlikely	Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface. There is no suitable habitat for this species on the subject site.
Little Bentwing-bat	Unlikely	Moist eucalypt forest, rainforest or dense coastal banksia scrub. Little Bentwing-bats roost in caves, tunnels and sometimes tree hollows during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats. They often share roosting sites with the Common Bentwing-bat and, in winter, the two species may form mixed clusters. There is no suitable habitat for this species on the subject site.

Species	Likelihood of occurrence in the Study area	Notes
Little Tern	Unlikely	Almost exclusively coastal, preferring sheltered environments; however may occur several kilometres from the sea in harbours, inlets and rivers (with occasional offshore islands or coral cay records). Nests in small, scattered colonies in low dunes or on sandy beaches just above high tide mark near estuary mouths or adjacent to coastal lakes and islands. The nest is a scrape in the sand, which may be lined with shell grit, seaweed or small pebbles.
Masked owl	**Possible**	Masked owls prefer heavier wooded eucalypt forests. They have large home-ranges of 500-1000ha per pair, and roost in moist eucalypt forested gullies. Suitable habitat occurs on the subject site.
Osprey	Unlikely	This species occurs in coastal and near-coastal areas from central eastern Qld south to the vicinity of Coffs Harbour in north-eastern NSW. It inhabits low-mid elevation dry eucalypt forest. Suitable habitat for this species does not occur on the subject site.
Rufous bettong	**Possible**	The Rufous bettong occupies areas with a sparse or grassy understorey in a variety of habitats from coastal eucalypt forests through tall, wet, sclerophyll to low, dry open woodland. Suitable habitat for this species occurs on the subject site.
Spotted-tailed quoll	Unlikely	The Spotted-tailed quoll occurs in a range of habitats including sclerophyll forests and woodlands, coastal heathlands and rainforests. This species may forage occurs on the subject site and adjacent roadside vegetation
Square-tailed kite	**Possible**	This very rare species is thinly distributed through open forests, woodland and sand plains, both coastal and sub-coastal. This species may forage occurs on the subject site and adjacent roadside vegetation.
Squirrel glider	Unlikely	The Squirrel glider occupies wet and dry sclerophyll forests with open dry sclerophyll forests regarded as optimum habitat. Mature or old-growth forest is preferred habitat. Suitable habitat for this species does not occur on the subject site.
Stuttering Frog	Unlikely	This frog lives in forests such as Antarctic Beech, wet sclerophyll and rainforests. It often hides in leaf litter near permanent fast-flowing streams. There is no suitable habitat for this species on the subject site.

Species	Likelihood of occurrence in the Study area	Notes
Swift Parrot	Unlikely	Migrates to the Australian south-east mainland between March and October. On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. There is no suitable habitat for this species on the subject site.
Three-toed Snake-tooth Skink	Unlikely	Rainforest and occasionally moist eucalypt forest, on loamy or sandy soils. The Three-toed Snake-tooth Skink lives in loose soil, leaf litter and rotting logs, and feeds on earthworms and beetle grubs. There is no suitable habitat for this species on the subject site.
Wallum Sedge Frog	Unlikely	Paperbark swamps and sedge swamps of the coastal "wallum" country. Wallum is a Banksia dominated lowland heath ecosystem characterised by acidic waterbodies. Olongburra Frogs are usually found amongst sedges and rushes in coastal wetlands. There is no suitable habitat for this species on the subject site.
Wompoo Fruit-Dove	Unlikely	Occurs in, or near rainforest, low elevation moist eucalypt forest and brush box forests. Feeds on a diverse range of tree and vine fruits and is locally nomadic - following ripening fruit. Suitable habitat for this species does not occur on the subject site.

4 IMPACTS AND AMELIORATION

4.1 Impacts of the Proposed Development

4.1.1 Introduction

This section examines the likely impacts of the Proposed development. The possible direct and indirect impacts of the proposal are outlined and amelioration measures to minimise impacts on flora and fauna are described.

4.1.2 Impacts on Flora

The proposed development may result in the loss of much of the grassland community on the subject site. Loss to the roadside vegetation may also be incurred.

4.1.3 Impacts on Fauna

The proposed development will result in a minor loss of foraging, sheltering or breeding habitat for native fauna however this loss is not considered to be significant due to occurrence of large areas of more suitable habitat in the locality.

4.1.4 Impacts on Threatened Fauna

The potential impact of the Proposed development on Threatened fauna recorded on the site is discussed in Section 5.2.4.

4.1.5 Corridor Impacts

The NPWS Key Habitats and Corridors database shows several regional habitat corridors within the locality of the subject site (**FIGURE 5**). The proposed development will not impact upon any of these local wildlife corridors.

4.2 Amelioration

4.2.1 Introduction

This section discusses possible ameliorative measures and opportunities for enhancing the natural environment on the subject site.

4.2.2 Amelioration for Plant Communities

Although the proposed development will not result in the loss of a significant area of native vegetation, care should be taken not to introduce weed species the subject site during the construction and occupation of the proposed sub-division lots.

Other amelioration measures include:

- Controlling weeds during construction;
- Controlling weeds in landscaped areas and areas of retained vegetation;
- Known environmental weeds should be avoided in landscaping; and
- Landscape plantings should include a majority of native species that will provide forage habitat for indigenous fauna.

4.2.3 Amelioration for Fauna

Although the proposed development will not result in the significant loss of native vegetation, care should be taken not to disturbe native fauna during the development of the subject site.

The following additional amelioration measures should apply:

- The Landowner should control dogs and cats.
- Appropriate disposal of rubbish and food scraps will reduce opportunities for non-native predators and disturbance adapted competitors.
- Landscape plantings should include a majority of native species that will provide forage habitat for indigenous fauna.

4.2.4 General Amelioration Measures

General amelioration measures, to reduce impacts on present drainage system and the surrounding vegetation communities, should include:

- Stormwater management should aim to achieve no significant net change in runoff; and
- Restrictions should be placed on the use of fires during extended dry weather periods.

5 STATUTORY CONSIDERATIONS

5.1 Introduction

This section includes assessments of the impacts of the Proposed development with regard to:

- Section 5A of the *Environment Protection & Assessment Act (1979)*;
- *State Environmental Planning Policy No. 44 (SEPP 44) - Koala Habitat Protection*; and
- the *Commonwealth Environment Protection and Biodiversity Conservation Act (1999)*.

5.2 Assessment of Significance (Seven Part Test)

5.2.1 Background

Under the *Threatened Species Conservation Amendment Act 2002*, the factors to be considered when determining whether an action, development or activity is likely to significantly affect threatened species, populations or ecological communities, or their habitats (known previously as the "8-part test"), have been revised. This affects s5A *EP&A Act*, s94 *Threatened Species Conservation Act 1995* (*TSC Act*) and s220ZZ *Fisheries Management Act 1994* (*FM Act*).

The revised factors maintain the same intent but focus consideration of likely impacts in the context of the local rather than the regional environment as the long-term loss of biodiversity at all levels arises primarily from the accumulation of losses and depletions of populations at a local level. This is the broad principle underpinning the *TSC Act*, State and Federal biodiversity strategies and international agreements. The consideration of impacts at a local level is designed to make it easier for local government to assess, and easier for applicants and consultants to undertake the Assessment of Significance because there is no longer a need to research regional and statewide information. The Assessment of Significance is only the first step in considering potential impacts. Further consideration is required when a significant effect is likely and is more appropriately considered when preparing a Species Impact Statement.

The Assessment of Significance should not be considered a "pass or fail" test as such, but a system allowing proponents to undertake a qualitative analysis of the likely impacts and ultimately whether further assessment needs to be undertaken via a Species Impact Statement. All factors must be considered and an overall conclusion must be drawn from all factors in combination. Where there is any doubt regarding the likely impacts, or where detailed information is not available, a Species Impact Statement should be prepared.

5.2.2 Flora

No Threatened flora species were recorded from the subject site.

5.2.3 Endangered Ecological Communities (EECs)

No Endangered Ecological Communities (EECs) were recorded on the site.

5.2.4 Fauna

An Section 5A "Assessment of Significance" will be completed for each fauna species recorded on the subject site, or considered a possible occurrence on the subject site.

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

5.2.4.1 Black-necked stork

Extent of local population

The NPWS database contained seventeen (17) records of this species within 10 kilometres of the Study area and 2693 sightings within the Clarence Valley LGA.

Stages of the life-cycle affected by the proposed development

The Black-necked stork inhabits swamps, mangroves, mudflats, dry floodplains, and irrigated land. It occasionally forages in open grassy woodland (Environment Australia 1999). An abundant supply of frogs and fish is required, together with suitable roost and nest trees, usually overhanging rivers and swamps (SFNSW 1995). It strides through the water probing for prey with its bill and may chase fish. The nest is a large flat pile of sticks, grass and rushes in a tree, usually near water (NPWS 2002).

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the North-east region. This analysis was based on local expert knowledge and ranked the significance of various forms of disturbance for the Black-necked stork, with the following results:

1st order disturbances	Drainage of wetlands Dams
2nd order disturbances	Power lines Intensive horticulture (tea trees)
3rd order disturbances	Pesticide contamination of wetlands Urban development Loss of nest trees
4th order disturbances	Shooting

Likelihood of local extinction

The Proposed development will not result in significant loss of nesting or forage habitat for this species. The subject site is cleared and highly disturbed with the road side vegetation adjacent to the property a probable artefact. The Proposed development is unlikely to have a significant impact on the Black-necked stork and is unlikely to result in the local extinction of this species.

5.2.4.2 Brolga *(Grus rubicunda)*

Extent of local population

The NPWS database contained four (4) records of this species within 10 kilometres of the Study area and 146 sightings within the Clarence LGA.

Stages of the life-cycle affected by the proposed development

Brolgas occur in northern and eastern Australia, but are generally uncommon and localised in the east (NPWS 2002). The species occurs around shallow swamps and swamp margins, floodplains, grasslands and pastoral lands, usually in pairs or parties (NPWS 2002). The feed mainly on the tubers of sedges which they dig from up to 15cm underground with their long bills, and will also take grain, molluscs and insects, and can be a pest in cereal crops (Readers Digest 1997).

Threats to the species include:

- Drainage of swamps and other wetlands;
- Reduced water quality from saltation and pollution;
- Use of herbicides, insecticides etc. near water;
- Destruction of nests by grazing stock;
- Frequent burning of wetlands;
- Predation by feral animals and domestic dogs;
- Alteration of hydrology into wetlands; and
- Collision with powerlines near nest sites and wetlands.

References:

Readers Digest (1997) Complete Book of Australian Birds 2nd Edition, Readers Digest Association, Far East Limited, Sydney.

Likelihood of local extinction

The Proposed development will not result in significant loss of nesting or forage habitat for this species. The subject site is cleared and highly disturbed with the road side vegetation adjacent to the property a probable artefact. The Proposed development is unlikely to have a significant impact on the Brolga and is unlikely to result in the local extinction of this species.

5.2.4.3 Grass owl (*Tyto capensis*)

Extent of local population

The NPWS database contained two (2) records of this species within 10 kilometres of the Study area and ten (10) sightings within the Clarence LGA.

Stages of the life-cycle affected by the proposed development

The NPWS Threatened Species Unit records the following information on the distribution and ecology of the Grass owl.

Grass owls are found in areas of tall grass, including grass tussocks in swampy areas, grassy plains, swampy heath, and cane grass, or sedges on flood plains. They rest by day in a 'form' - a trampled down platform in a large tussock or other heavy growth. If disturbed, they burst out of cover flying rather slowly, before dropping straight down again into cover. They also nest in trodden down grass.

The NPWS Threatened Species Unit discusses the following threats for the Grass owl:

- Loss of suitable habitat from grazing, agriculture and development;
- Disturbance and habitat degradation by stock;
- Use of pesticides in agriculture to control rodent populations thereby reducing food sources for owls, and potentially poisoning owls; and
- Frequent burning, which reduces ground cover.

Likelihood of local extinction

The Proposed development will not result in significant loss of nesting or forage habitat for this species. The subject site is cleared and highly disturbed with the road side vegetation adjacent to the property a probable artefact. The Proposed development is unlikely to have a significant impact on the Grass owl and is unlikely to result in the local extinction of this species.

5.2.4.4 Glossy black-cockatoo

Extent of the local population

The NPWS online database contained two (2) sightings of this species within 10 kilometres of the Study area and 417 sightings in the Clarence Valley LGA.

Stages of the life cycle affected by the proposed development

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the North-east region. The analysis identified breeding sites for the Glossy black cockatoo as consisting of nests in large trees with large hollows (dead and alive) near streams and within 5-20km of a food source. The Glossy black cockatoo will shelter in stands of tall trees in elevated locations like ridgelines within range of the feeding resource. There is a relationship between roost sites and surface water sites. The Glossy black cockatoo usually forages close to the nest but is capable of travelling up to 20km away. It feeds on adult *Allocasuarina littoralis* and *A. torulosa* with individual trees believed to be selected on the basis of the nitrogen content of seeds. It will occasionally use alternative foods.

The RFA analysis (Environment Australia 1999) ranked the significance of various forms of disturbance for the Glossy black cockatoo, with the following results:

1st order disturbances	Clearing for agriculture Grazing and associated burning Urban development Logging that reduces age classes of eucalypts and *Allocasuarina*
3rd order disturbances	Cats climbing into nests Firewood collection

One of the preferred food trees for Glossy black-cockato, *A. Littoralis*, is found in roadside vegetation adjacent to the subject site. Suitable nest sites may exist within the wider area but do not occur on the subject site. It is considered likely that this species will continue to utilise suitable habitat on the road side.

Likelihood of local extinction

The proposed development is considered unlikely to result in the local extinction of this species.

5.2.4.5 Grey-crowned babbler (*Pomatostomus temporalis*)

Extent of the local population

The NPWS database contained six (6) records of this species within 10 kilometres of the Study area and 293 records of in the Clarence Valley LGA.

Stages of the life-cycle affected by the proposed development

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the north-east region. The analysis was based on local expert knowledge and identified breeding and sheltering sites for the Grey Crowned Babbler as consisting of nests in mid-storey canopy. The Grey Crowned Babbler forages in edges of dry open sclerophyll, woodlands, and the margins between floodplains and adjacent highlands, feeding on insects under bark and on the ground.

The RFA analysis (Environment Australia 1999) ranked the significance of various forms of disturbance for the Grey Crowned Babbler, with the following results:

1st order disturbances	Clearing - loss of habitat Grazing and associated frequent burning - loss of logs Pasture improvement and cropping
2nd order disturbances	Exotic predators - competition and predation by foxes, cats and dogs Collection of firewood Intensive horticulture encroaching on grazing area

Suitable habitat for the Grey-crowned babbler occurs within the roadside vegetation adjacent to the subject site. Suitable nest sites may exist within the wider area but do not occur on the subject site. It is considered likely that this species will continue to utilise suitable habitat on the road side.

Likelihood of local extinction

The proposed development is considered unlikely to result in the local extinction of this species.

5.2.4.6 Masked owl

Extent of the local population

The NPWS online database contained one (1) sighting of this species within 10 kilometres of the Study area and 101 sightings in the Clarence Valley LGA.

Stages of the life cycle affected by the proposed development

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the North-east region. The analysis identified breeding sites for the Masked owl as hollows (usually vertical) in large, live trees. This owl shelters in hollows and in densely foliaged native and exotic understorey trees. The Masked owl feeds in sclerophyll forest with sparse, open understorey, particularly in the ecotone between wet and dry forest and non-forest habitat. It feeds on medium and small terrestrial mammals, some arboreal mammals and birds.

The RFA analysis (Environment Australia 1999) ranked the significance of various forms of disturbance for the Masked owl, with the following results:

1st order disturbances	Clearing for agriculture
2nd order disturbances	Logging which increases structural density of forest which effects mid to ground layer and thus affects manoeuvrability
3rd order disturbances	Fire - high frequency
4th order disturbances	Clearing for urban development
5th order disturbances	Road-kills
6th order disturbances	Nest and roost site disturbance

This species may forage on the subject site and adjacent wooded areas and roadside vegetation. The subject site does not provide suitable nesting habitat. The masked owl will probably continue to utilise these areas in spite of the proposed development.

Likelihood of local extinction
The Proposed development is considered unlikely to result in the local extinction of this species.

5.2.4.7 Rufous bettong *(Aepyprymnus rufescens)*

Extent of the local population
The NPWS online database contained six (6) sightings of this species within 10 kilometres of the Study area and 247 sightings in the Clarence Valley LGA.

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the North-east region. The analysis was based on local expert knowledge and identified breeding and sheltering sites for the Rufous bettong as consisting of grass tussocks and logs, piles of fallen trees and scattered clumps of vegetation (e.g. blackberry). The Rufous bettong forages in grassy open forest and woodland without foxes, and with quolls or dingoes.

The RFA analysis (Environment Australia 1999) ranked the significance of various forms of disturbance for the Rufous bettong, with the following results:

1st order disturbances	Predation - foxes
2nd order disturbances	Altered fire regimes frequently encourages blady grass - poor forage
3rd order disturbances	Clearing - loss of habitat Clearing - fragmentation
4th order disturbances	Intensive horticulture for tea tree cultivation

This species may forage on the subject site and adjacent wooded areas and roadside vegetation. The subject site does not provide suitable nesting habitat. The masked owl will probably continue to utilise these areas in spite of the proposed development.

Likelihood of local extinction
The Proposed development is considered unlikely to result in the local extinction of this species.

5.2.4.8 Square-tailed kite

Extent of the local population

The NPWS online database contained three (3) sightings of this species within 10 kilometres of the Study area and 122 sightings in the Clarence Valley LGA.

Stages of the life cycle affected by the proposed development

As part of the RFA process, Environment Australia (1999) conducted an analysis of the responses of forest fauna to various forms of land cover disturbance in the North-east region. The analysis identified breeding sites for the Square-tailed kite as consisting of nests in tall trees with large branches in tall, open sclerophyll forest and woodland with or adjacent to areas of high densities of passerine birds. It typically occurs on tablelands and coastal plains. The Square-tailed kite forages on a high density of passerine birds, particularly honeyeaters. It will occasionally take lorikeets, quail, pipits and canopy foliage gleaners.

The RFA analysis (Environment Australia 1999) ranked the significance of various forms of disturbance for the Square-tailed kite, with the following results:

1st order disturbances	Clearing for agriculture
2nd order disturbances	Grazing and associated burning Logging which increases the structural density through reducing age classes, decreased nectar production Intensive horticulture Nest site loss
3rd order disturbances	Urban development
4th order disturbances	Egg collecting

This species may occasionally forage on the site and in suitable habitats on and adjacent to the subject site. The proposed development will not contribute toward the loss or fragmentation of habitat for this species and therefore will not result in a reduction in the availability of forage resources.

Likelihood of local extinction

The proposed development is considered unlikely to result in the local extinction of this species.

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

Thirty-three (33) endangered populations have been identified under the *TSC Act*. The following four (4) endangered populations occur in north-eastern NSW:

- Long-nosed potoroo population, Cobaki Lakes and Tweed Heads West;
- Emu population in the NSW North Coast Bioregion and Port Stephens LGA;
- Low growing form of *Zieria smithii*, Diggers Head; and
- *Glycine clandestina* (Broad-leaf form) in the Nambucca LGA.

The proposed action will not have an adverse affect on any of these endangered populations.

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

(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or

(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.

Not applicable

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

(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and

Development of the subject site will not cause a significant loss of native vegetation and habitat. The site is already highly modified and disturbed.

(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and

No areas of potential habitat, for the threatened species considered to be a possibly occurring, will be fragmented or isolated from any other areas of potential habitat as a result of the proposed development.

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

The subject site occurs within a rural setting, with agricultural and forested land occurring in the vicinity. The site is already highly modified and disturbed and is relatively unimportant to long-term survival of the species, population or ecological community in the locality.

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

Critical habitat areas listed under the *Threatened Species Conservation Act (1995)* currently consist of habitat for Mitchell's rainforest snail in Stott's Island Nature Reserve, and habitat for the Little penguin population in Sydney's North Harbour.

There will be no adverse effects on either of these critical habitats from the action proposed.

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

No recovery plans or draft recovery plans have been prepared for the threatened species predicted to occur on the site.

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

A "threatening process" means a process that threatens, or may have the capability to threaten, the survival or evolutionary development of a species, population or ecological community. Key Threatening Processes have been listed in Schedule 3 of the *TSC Act (1995)*.

Key Threatening Processes (Schedule 3):

- *Lantana camara;*
- Exotic vines and scramblers;
- *Bufo marinus;*
- Invasion of the yellow crazy ant;
- Feral pigs;
- Competition and habitat destruction by feral goats;
- Entanglement in, or digestion of anthropogenic debris in marine and estuarine environments;
- Introduction of the large earth Bumble bee, *Bombus terrestris;*
- Removal of dead wood and dead trees;
- Death or injury to marine species following capture in shark control programs on ocean beaches;
- Invasion of native plant communities by exotic perennial grasses;
- Infection of frogs by amphibian chytrid, causing the disease chytrodiomycosis
- Competition from feral honeybees;
- Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands;
- Clearing of native vegetation;
- Bushrock removal;
- Ecological consequences of high frequency fires;
- Human-caused climate change;
- Invasion of native plant communities by Bitou Bush and Boneseed;
- Loss and/or degradation of sites used for hilltopping by butterflies;
- Predation by the European red fox;
- Predation by feral cats;
- Predation by the ship rat on Lord Howe Island;
- Predation by the Plague minnow (*Gambusia holbrooki*);
- Infection of native plants by *Phytophthora cinnamomi;*
- Infection by *Psittacine circoviral* (beak and feather) disease affecting endangered *Psittacine* species and populations;
- Importation of red imported fire ants into NSW; and
- Competition and grazing by the feral European rabbit.

The proposed development will not contribute towards the clearing of native vegetation, a key threatening process listed on Schedule 3 of the *TSC Act (1995)*. The final determination of the NSW Scientific Committee notes that clearing of native vegetation is recognised as a major factor contributing to loss of biological diversity,

with impacts such as: destruction of habitat; fragmentation of habitat; riparian zone degradation; increased greenhouse gas emissions; increased habitat for invasive species; loss of leaf litter layer; loss or disruption of ecological function (*e.g.* loss of populations of pollinators or seed dispersers) and changes to soil biota.

Habitat loss is the main threatening process affecting all Subject species. The Proposed development will not make a contribution towards the loss of habitat in the region.

On the basis of this assessment, it is considered that a Species Impact Statement (SIS) is not required.

5.3 SEPP 44 Koala Habitat Assessment

STATE ENVIRONMENTAL PLANNING POLICY No. 44 - KOALA HABITAT PROTECTION

In response to the state-wide decline of Koala populations the Department of Planning has enacted SEPP - 44 Koala Habitat Protection. The Policy aims to "encourage the proper conservation and management of area of natural vegetation that provide habitat for Koalas, to ensure permanent free-living populations over their present range and to reverse the current trend of population decline."

A number of criteria in the SEPP are to be addressed:

*1. **Does the policy apply?***
Does the subject land occur in an LGA identified in Schedule 1?

The subject site occurs in the Clarence Valley LGA, which is listed under Schedule 1.

Is the landholding to which the DA applies greater than 1 hectare in area?

Yes.

*2. **Is the land potential Koala habitat?***
Does the site contain areas of native vegetation where the trees of types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component?

No.

*3. **Is there core Koala habitat on the subject land?***
Under SEPP 44 core Koala habitat is defined as 'an area of land with a resident population of Koalas, evidenced by attributes such as breeding females (that is females with young) and recent sightings of and historical records of a population'.

No

The NPWS online database contained three hundred and 503 sightings of this species in the Clarence Valley LGA.

Evidence of Koala activity (scats) was recorded on the subject site or adjacent roadside vegetation.

4. Is there a requirement for the preparation of a Plan of Management for identified core Koala habitat?

No.

5.4 Environment Protection & Biodiversity Conservation Act (1999)

5.4.1 Introduction

The *Environment Protection & Biodiversity Conservation (EPBC) Act (1999)* was passed by Commonwealth Parliament in June 1999 and came into force on 16 July, 2000. A person must not, without an approval under the Act, take an action that has or will have, or is likely to have, a significant impact on a matter of National Environmental Significance (NES). These matters are listed as:

(a) the world heritage values of a declared World Heritage property;

(b) the ecological character of a declared Ramsar wetland;

(c) a threatened species or endangered community listed under the Act;

(d) a migratory species listed under the Act; or

(e) the environment in a Commonwealth marine area or on Commonwealth land.

The Act also prohibits the taking, without an approval under the Act, of:

(a) a nuclear action; or

(b) an action in a Commonwealth marine area or on Commonwealth land that has or will have, or is likely to have, a significant impact on the environment.

An action includes a project, development, undertaking or an activity or series of activities. An action does not require approval if it is a lawful continuation of a use of land, sea or seabed that was occurring before the commencement of the Act. An enlargement, expansion or intensification of a use is not a continuation of a use.

The *EPBC Act (1999)* does not require Commonwealth approval for the rezoning of land. It does, however, suggest that when rezoning land, planning authorities should consider whether to allow actions that could significantly affect NES matters or the environment of Commonwealth land.

Matters of NES in NSW are:

(a) Declared World Heritage Areas;

(b) Declared Ramsar Wetlands;

(c) Listed Threatened Species (Schedule 1 and 2 of Commonwealth Endangered Species Protection Act 1992);

(d) Endangered Ecological Communities (EECs; and

(e) Listed migratory species (JAMBA and CAMBA).

5.4.2 Subject Site Assessment - Occurrence of Matter of NES

A Commonwealth Assessment will be required for proposed activities on the subject site if they affect a matter of NES. There are no declared World Heritage Areas, Ramsar

Wetlands Endangered Ecological Communities or Listed migratory species (JAMBA and CAMBA) in the locality, study area or subject site.

The subject site does not contain habitat for populations of Endangered species listed in the *EPBC Act (1999)*.

5.4.4 Requirement for Commonwealth Assessment

On the basis of the above assessment, it is concluded that Commonwealth Assessment is not required for the proposed development of the subject site.

6 SUMMARY AND CONCLUSIONS

James Warren and Associates (JWA) have been engaged by Harrison Shepherd Pty Ltd to complete a Flora and Fauna Assessment for land comprised of Lot 104 DP751388 at James Creek Road, James Creek, NSW.

The Subject Site covers approximately 32.91 hectares and was previously used for agriculture (i.e. grazing and/or sugar cane cropping). A patch of remnant eucalyptus forest occurs to the immediate north and small rural blocks occur to the south. There is a strip of forest roadside vegetation along the southern border of the block. The site is situated between Yamba to the east and Maclean to the west, Yamba Road and the Clarence River in the north and Austens lane in the south.

The proposed development consists of rezoning the block from 1(a) rural (agriculture protection) to 1(s) rural small holdings.

A flora survey was completed and two vegetation communities and forty-one (41) flora species were recorded. The site consists of a remnant agricultural field with a strip of forested roadside vegetation. A fauna survey resulted in records of ten bird species. No amphibians, mammals or reptiles were observed. No threatened species were recorded.

The proposed development may result in the loss of much of the grassland community and a loss of the roadside vegetation may also be incurred. This may result in a minor loss of foraging, sheltering or breeding habitat for native fauna occurring in the locality however this loss is not considered significant in relation to the available habitat in the locality.

A Section 5A assessment was undertaken for eight (8) Threatened fauna species considered a possible occurrence over time. The assessment concluded that the impacts of the Proposed development would be unlikely to result in the local extinction of any of these species. A Species Impact Statement is not required.

A Koala Habitat assessment of the site under SEPP 44 (Koala Habitat Protection) concluded that the subject site does not comprise core Koala habitat, and a Koala Plan of Management is not required.

An assessment under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999) concluded that the Proposed development will not have a significant impact on any matters of National Environmental Significance. Commonwealth assessment of the proposal is not required.

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APPENDIX 1
PLANT SPECIES LIST

Family	Botanical Name	Common Name
Dicots		
Apocynaceae	*Parsonsia straminea*	Common Silkpod
Asteraceae	*Ageratina adenophora**	Crofton weed
Asteraceae	*Ageratum houstonianum**	Blue billygoat weed
Asteraceae	*Bidens pilosa**	Cobblers pegs
Asteraceae	*Erechtites valerianifolia**	Brazilian fire weed
Asteraceae	*Osteospermum calendulaceum*	Stinking roger
Asteraceae	Senecio madagascariensis*	Fire weed
Asteraceae	*Taraxacum officinale**	Dandelion
Casuarinaceae	*Allocasuarina littoralis*	Black she-oak
Campanulaceae	*Wahlenbergia stricta* subsp. *alterna*	Bluebell
Epacridaceae	*Leucopogon trichostylus*	
Fabaceae	Acacia *complanata*	Flat-stemmed wattle
Fabaceae	Acacia *lelocalyx*	Early black wattle
Lauraceae	*Cinnamomum camphora*	Camphor laurel
Fabaceae	*Pultenaea villosa*	Hairy Pea Bush
Myrtaceae	*Eucalyptus siderophloia*	Grey iron bark
Myrtaceae	*Lophostemon suaveolens*	Swamp turpentine
Rhamnaceae	*Alphitonia excelsa*	Red ash
Solanaceae	*Solanum mauritianum*	Tobacco Bush
Verbenaceae	*Lantana camara**	Lantana
Ferns		
Dennstaedtiaceae	*Pteridium esculentum*	Bracken fern
Monocots		
Cyperaceae	*Lepidosperma laterale*	Variable sawsedge
Juncaceae	*Juncus usitatus*	Common rush
Lomandraceae	*Lomandra longifolia*	

Luzuriagaceae	*Eustrephus latifolius*	Wombat Berry
Phormiaceae	*Dianella caerulea*	Flax lily
Poaceae	*Andropogon virginicus**	Whiskey grass
Poaceae	*Aristida* sp.	Wire grass
Poaceae	*Entolasia stricta*	Wiry panic
Poaceae	*Chloris sp.*	Feathertop rhodes grass
Poaceae	*Cymbopogon refractus*	Barbed wire grass
Poaceae	*Sporobolus sp.*	
Poaceae	*Cynodon dactylon*	Couch grass
Poaceae	*Eragrostis* sp.	Lovegrass
Poaceae	*Imperata cylindrica*	Blady grass
Poaceae	*Themeda australis*	Kangaroo grass
Poaceae	*Entolasia stricta*	Wiry panic
Poaceae	*Setaria* sp.*	Pigeon grass
Poaceae	*Digitaria parviflora*	Small-flowered finger grass
Poaceae	*Paspalum* sp.	
Poaceae	*Pennisetum* sp.	

* indicates an exotic species

ANNEXURE E

Aboriginal Cultural Heritage Site Assessment

Prepared for Harrison Shepherd Pty Ltd
Professional Surveyors, Consultants and Town Planners
Incorporating Mr. Peter Williamson
PO Box 397
Yamba NSW 2463

Re: Rezoniong application from Rural to Resendential
DP 751388
Lot 104, James Creek Road NSW 2463

July-August
2009

By Ron Heron

Table of Contents

1. Introduction.

In late May 2009, I was requested to conduct an Aboriginal Cultural Heritage Site Assessment for Harrison Shepherd Pty Ltd .

The purpose of this Aboriginal cultural heritage site assessment is to ascertain if there were any Aboriginal sites of significance present, to record them, and to recommend ways to avoid destruction of these sites and to consult with Yeagl Aboriginal Land Council about the Aboriginal cultural heritage site assessment and to see if there is any knowledge of sacred sites that exists within the study area.

2. Description of the Study Area.

The Study Area is a large portion of land that is designated for sub divisions and has had extensive land clearing.Some of the flora that would have previously been present would have been (Stringy Bark, Bloodwood, Eucalyptus tetra donta, Wiggly Gums, Apple Gums,Wattles)/Grasses (Kooch kikuyu Blade grass Cane grass Barbed wire grass) and other small native flora and introduced noxious weeds. The land is sloped on a small gradient of approximately 5-10 degrees on the northern side of the property.

Previous Land use.

The property was used for small crop growing and we did find evidence of land clearing.

3.) Location of the site.

The proposed development site is located within the Clarence Valley Council LGA also within the Yeagl Country boundary. South of Maclean along James Creek Road Lot 104 James Creek 2463, Development proposal No# 751388. *(See map figure 1,2,3)*

TRIBAL BOUNDARIES

THE YAYGIR BOUNDARY

The tribal areas and the nature of differences among the dialects spoken within the area being studied are very complex. Defining tribal boundaries within the study area is therefore a continuous issue. Crowley (1978), for example, disputes the description by Smythe (1978) of the Yaygir area, suggesting that it is too small. 'The actual Yaygir area extended from the coast inland as far as Cowper on the Clarence River rather than just Maclean, south to Coffs Harbour rather than to just Wooli and north to Evan's Head rather than to just the mouth of the Clarence. This data comes from my own fieldwork on Yaygir (Crowley 1978:254).

My understanding is that the Yaygir area extends from the coast inland as far as Ulmarra , which is further than either Smythe or Crowley claim. Crowley's southern boundary of Coffs Harbour is too far south and the northern boundary of Evan's Head is too far north. However, Smythe describes the area as extending from the mouth of the Clarence River in the north to Maclean in the west and Wooli in the south. I was able to establish from my interviews with some of the Yaygir people that their tribal area extended from the small town of Corindi Beach in the south to Black Rocks in the north which is in between the towns of Evan's Head and Iluka, north of the Clarence River.

4. Proposed Development.

The proposed development is to become urban development by sub dividing the land and implementing all that urban development entails e.g (Roads, Electricity Sewage etc.)..

5. Description of Impact.

After conducting the field site survey I observed the ground and sandy found that the clayish soil would have been to hard and unsuitable and it would be very unlikely any burials would been present. After research and consultation with Yaegl Land Council and after the site assessment I have come to the conclusion that other sites of significance such as Dreamtime story affiliation Bora rings middens and Campsites have not been recorded or known by modern local Yeagl Aboriginals or seem to have any knowledge of previous occupation within the study area with this in mind there should be no impact on Aboriginal Sites of Significance.

6. Aboriginal Cultural Values Assessment.

After conducting literature review and researching through my personal records and with consultation with the Yeagl community no evidence of any sites of significance such as Campsites, Middens, Burials, Bora rings and Stoneaxe factories or quarries could be located.The proposed development site holds no Aboriginal cultural value to the local Aboriginal people of today.

7. Aboriginal Community Consultation.

Aboriginal Community Consultation with Yeagl Local Aboriginal Land Council was conducted by verbal discussions about the site assessment and location of the site and if anyone knew of any Aboriginal sites of significance existed on or in close proximity to the site, none were known. Everyone was pleased to be consulted on such matters and have no objections to the development going ahead.

8. Methodology.

Firstly a review of Aboriginal Archaeological reports from National Parks and Wildlife Services was conducted of the area and surrounding area. A Heritage Study by D. Byrne (1986) "Aboriginal Archaeological Sites in the Shire of Maclean" was the only report that could be located and yielded useful information. I researched through my own personal files searching for any information containing cultural knowledge of the study area.

A field survey was conducted on Tuesday 28th July, This was carried out on foot, Walking in West to East transects, from South to North . The purpose of the field survey was to search all over the ground surface to ascertain if there were any Aboriginal sites of significance present and to record them.

The location of the study area the terrain, the soil consistency and the flora and fauna was also taken into consideration to determine if there were any Aboriginal sites of significance present.

The field survey was conducted to also search for artefacts such as stone implements by keeping a keen trained eye on the ground and collecting samples especially any foreign stones as the stones that are naturally from the site were not used in the making of stone implements.

9. Results.

My findings after and researching through my personal records and a conducting literature review and with consultation with the Yeagl community no evidence of any sites of significance such as Campsites, Middens, Burials, Bora rings, and Stoneaxe factories or quarries could be located.

No Human Burials or bones were found because I don't think this site would be suitable for a Traditional Aboriginal Burial due to location and the hardness of the soil. So after Researching and Yeagl consultation and fieldwork no evidence could be found of any large Aboriginal Sites of Significance. .

10. Conclusion.

I was asked to do a Aboriginal cultural heritage site assessment of Lot 104 James Creek road NSW 2463 to ascertain if there were any Aboriginal sites of significance present, to record them, and to recommend ways to avoid destruction of these sites and to consult with Yeagl Aboriginal Land Council about the Aboriginal cultural heritage site assessment and to see if there is any knowledge of sacred sites that exists within the study area. Upon completion of the field study and research and consultation, no other evidence could be found of sites of significance and I don't see any reason that the development can not go ahead.

11. Recommendations

The proposed development has had extensive land clearing therefore it is expected that the proposed development would not impact on Aboriginal Heritage or Cultural values, However if any material of Aboriginal origin be located whilst excavation or ground disturbance is taking place, work should cease and the Project manager and the Aboriginal cultural officer should be notified immediately.

References

Byrne. D., 1986 Aboriginal Archaeological Sites in the Shire of Maclean: *A Heritage Sudy. A Report prepared for Maclean Shire Council.*
Department of Environment and Conservation (NSW) 2004/5 National Parks and Wildlife Act 1974: Part 6 Approvals *Interim Community Consultation Requirements for NSW.*
Heron. R., 1990 My People, My Culture, A study of the Aboriginal People on the Lower Clarence River.
Smith. J. and Crowley. B., 1978 Tribal Boundaries of New South Wales.
NSW Dept of lands

CONTOUR INTERVAL 1 METRE
DENOTES EDGE OF TREE CANOPY
DENOTES EDGE OF BITUMEN
DENOTES EDGE OF FORMATION
DENOTES EXISTING POWER LINES

GRID NORTH

MGA

104
DP 751388

JAMES CREEK ROAD

ROAD 20.115 WIDE

HARRISON SHEPHERD PTY.LTD.
Professional Surveyors and Consultants
Incorporating Peter M. Williamson

9/19 Coldstream Street
YAMBA NSW 2464
(02)66461692 Fax(02)66468088
email:survey1@bigpond.com

Cnr Tweed & Fawcett Streets
BRUNSWICK HEADS NSW 2483
Ph/Fax (02)66857477

121 Alcorn Street
SUFFOLK PARK NSW 2481
Ph/ Fax(02) 66857277

PLAN : LOT 104 DP751388

CLIENT : NEIL GARRARD BUILDING CONTRACTORS PTY LTD
REF. No. 08068
DWG. No. 08068PHOTO

DESIGN	*
DRAWN	*
CHECKED	*
APPROVED	*
DATE	30/04/2009
R.R.	1:2500 @ A3
DATUM: AHD	

Figure 1 An aerial photograph of the subject land.

REZ2011/0003

Harrison Shepherd Pty Ltd April 2011

Date: 31-5-11
Receipt No: 499675
Amount: $2500-00

PLANNING PROPOSAL

for the rezoning of LOT 104 DP 751388

James Creek Road, James Creek

SCANNED

DOC #
DOC LOC
M - 2 JUN 2011
D. Morrison
CLARENCE VALLEY COUNCIL

TABLE OF CONTENTS:

1. PRELIMINARY

1.1

This planning proposal has been drafted in accordance with Section 55 of the Environmental Planning and Assessment Act, 1979 and the Department of Planning's "A guide to preparing Planning proposals" (July 2009).

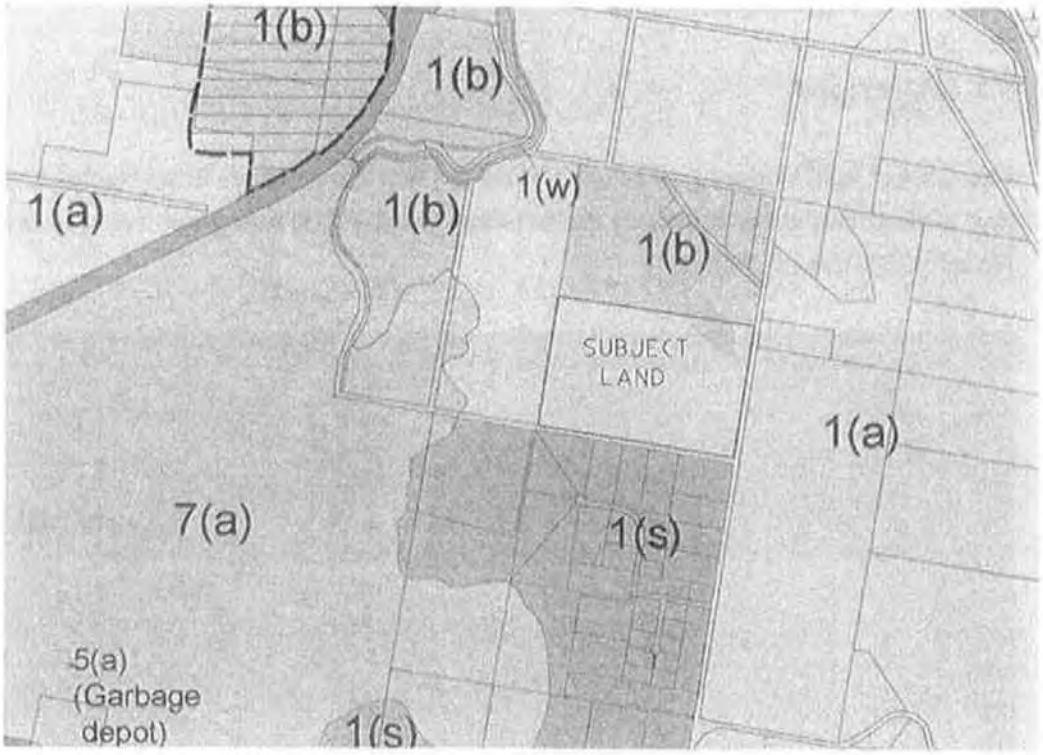
1.2 Subject Land

The subject land is identified as Lot 104 DP751388, James Creek Road, James Creek and is identified in the following extract from the 1:25000 topographical map series No'ed 9539-3S and 9539-2S.

The subject land has an area of approximately 33.48 hectares by Deed.

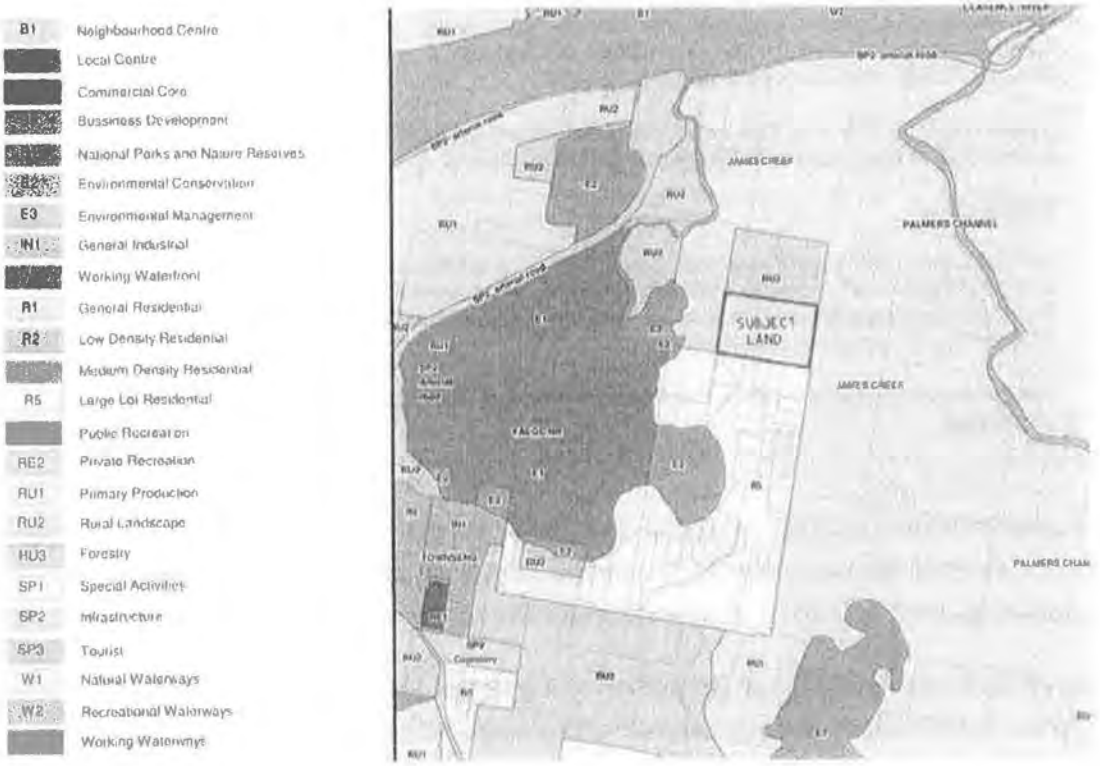
1.3 Current Zoning

The land is currently zoned 1(a) Rural (Agricultural Protection) Zone under the Maclean Local Environmental Plan 2001.



The Draft Clarence Valley Local Environmental Plan 2010 (Draft CVLEP 2010) was adopted by Council in 2010 and has currently been referred back to the State government for final approval.

The Draft CVLEP 2010 proposed a zoning of RU1 over the subject land. The proposed zoning in the Draft CVLEP 2010 proposes a minimum allotment sizes similar to that of the current Maclean LEP 2001.



Background

The subject land was formerly a cane farm. A letter from the original owner describing the former use is attached below.

Farming History of Lot 104, James Creek.

Bush land until 1969.
Cleared in three stages up until 1973.
By 1975, total area planted in sugar cane and continued until 2005.
Planted cane was fertilized with Crop King 44, N.P.K. 8.5/9.4/26.5 or an equivalent mix plus Aqua Ammonia at one t/ha 20.5% Nitrogen or 1990 Urea @ 450 kg/ha @ 46% N.
Ratooned crops with Aqua Ammonia or Urea at the same rate.
Weed control was by cultivation until about 1990 and then by cultivation until crop was ½ mtr high then had one spraying of Herbicide Velpar K4 @ 2.5 kg/ha or a mixture of 1.5 kg/ha Atrazine,1.5kg/ha of Diuron and 1.5 L/ha Paraquat.

Fallow land had filter mud from sugar mill spread when available and a crop of Dolicos Lab lab or in later years soybeans planted.

Insecticides

For the last ten years cane seed sets were dipped in a solution of Shirtan (250ml in 200 L water). Methoxy Ethyl Mercuric Chloride for the control of pineapple disease also sprayed with Lorsban (Chlorpyrifos) (500 ml /ha) for control of black beetles.

For the past three years the area has been grassed and grazed by cattle and sheep.

The land is predominantly a cleared site and is currently being utilised for grazing. It is adjacent to rural residential development while the remaining surrounding lands are predominantly 1(a) Rural or 1(b) rural zonings under the Maclean LEP 2001.

In February 2005, Gulaptis and Smith (on behalf of a group of James Creek landowners) approached the former Maclean Shire Council with a request for consideration of their lands to be rezoned to a "combination of zones which may incorporate 2(a) Residential (low Density) zone, 2(b) Residential (Medium Density) Residential zone, 3(a) Business Zone and 5(a) Special Uses zone "(Gulaptis and Smith, 2005, see Annexure A)

A sewer feasibility study was also undertaken by Mark Burridge and Associates in January 2005. (See Annexure B)

Kahuna No.1 Pty Ltd purchased the subject land in April 2008.

In September 2008 a Development management Unit deputation regarding rezoning of the subject land was held. The minutes from this meeting advised" Council's strategic planning section is of the view that consideration of rezoning of this land should follow the government's adoption of the Mid north Coast regional Strategy and then if the area is included in the Local growth area maps, the preparation of the Local growth management strategy. This process is likely to take in the order of two years, depending on State

government's decision making timelines and the complexity of the planning issues that arise" (David Morrison, DMU minutes, 2008 See Annexure C)

A Fauna and Flora study was undertaken by James Warren and Associates in August 2009, (Annexure D) and an Aboriginal Cultural Heritage Assessment was undertaken by Ron Heron in July and August 2009. (Annexure E) Preliminary designs for subdivision were also prepared during this period and presented to Council officers for consideration.

The Mid- North Coast Regional Strategy was adopted in March 2009. The Regional strategy identified some of the lands (including the subject land) at James Creek with potential as urban "Growth areas." See map below of the "Potential" urban growth areas at James Creek and Gulmarrad. (Source: Department of planning)

2. OBJECTIVE OF THE PLANNING PROPOSAL

It is intended to rezone the subject land to a combination of residential 2(a) residential (low density) and residential 2(b) (medium density) with the establishment of a small 3(b) commercial zoning under the current Maclean LEP 2001.

If the Draft Clarence Valley LEP 2010 is adopted prior to the rezoning of the subject land the proposed zonings would include provision for a combination of R1 General residential, R3 Medium density residential along with a local neighbourhood centre with a B1 neighbourhood centre zoning.

3. PROVISIONS OF THE PLANNING PROPOSAL

The objective of the planning proposal will be achieved by either:-

a) An amendment to the Maclean LEP 2001 or
b) An amendment to the Clarence Valley LEP 2010

This will be dependent on which of these is the current legislation at the time the amendment is made.

Amendment to the Maclean LEP 2001 will require:-

a) The creation of a James Creek specific zone;
b) Creation of new zones that incorporate provisions and objectives of the proposed CV LEP zonings;
c) Identification of James Creek as an Urban Release Area;
d) The addition of a clause in the LEP requiring the preparation of a DCP for the land prior to development consent.

Amendment to the Clarence Valley LEP will require:-

a) Amending the CV LEP 2010 maps to zone the subject land R1 low density residential and R3 medium density;
b) Amending the CV LEP 2010 maps to include an area specified as a B1 neighbourhood centre.
c) Amendment of the minimum lot size map;
d) Inclusion of James Creek as an Urban Release area under Part 6 of the CV LEP 2010.

4. JUSTIFICATION

4.1 Is the proposal a result of any strategic study or report?

The Mid North Coast Regional Strategy

As previously stated the subject land is within the various allotments at James Creek that were identified in the Mid-North Coast regional strategy (March 2009) as "Growth areas." "Not all land identified within the growth Areas can be developed for urban uses. All sites will be subject to more detailed investigation to determine capability and future yield. Land that is subject to significant natural hazards and/or environmental constraints will be excluded from the development." (Mid North Coast regional Strategy, 2009)

The subject land has been assessed with various detailed reports addressing environmental issues/ natural hazards.

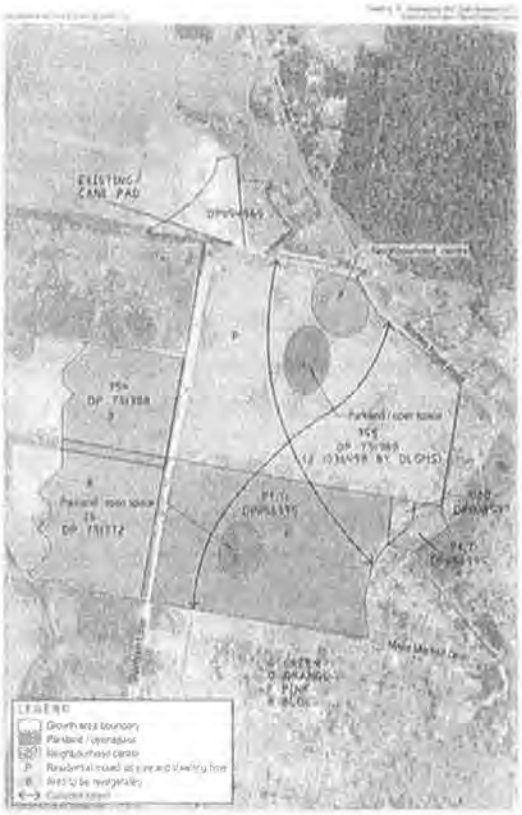
The Mid North Coast Regional Strategy identified Maclean as a major town. The land the subject of this planning proposal provides-:

- Protection of high value environments by avoidance of these areas;
- Residential development to cater for a future housing demand to accommodate part of the anticipated future population growth;
- The proposal satisfies the regionals strategic criteria to cater for the needs of smaller households and an ageing population by an appropriate dwelling mix of 60 per cent traditional style dwellings and 40 per cent multiunit style;
- The land is located in close proximity to the Townsend Industrial Estate, it is situated between Maclean and Yamba and it is within two kilometres of the Pacific Highway– offering a variety of employment opportunity for future populations.
- The proposal encourages growth and redevelopment in the vicinity of the major town of Maclean while avoiding the sensitive environmental regions;
- It is wholly within the identified growth areas;
- The subject land is not affected by flooding and adequate buffers will be provided to protect both neighbouring rural and rural residential development as well as the natural environment;
- The developer is prepared to enter into a development agreement to satisfy the NSW Government State Infrastructure Strategy and equity considerations.

The planning proposal provides a unique and pleasant living environment while retaining the existing vegetation. Development of the area will include a large amount of reafforestation with species native to the site.

The Draft Local Growth Management Strategy(DGLMS)

The simultaneous release of the planning proposal for Gulmarrad and the Draft Local Growth Management Strategy (DGLMS) which promotes development at Gulmarrad has created a situation where there is no opportunity for this planning proposal to be consistent with the DGLMS. This document was released to the public on the 3rd December, 2010. A planning proposal for the rezoning of Gulmarrad which was prepared by Clarence Valley Council was also prepared and advertised at the same time. As council prepared both these documents they are consistent with one another. From discussions with strategic planners at Council the reason Council prepared the planning proposal for land at Gulmarrad was because Council had consented to the proposed rezoning of Lot 2 DP1036498 (actually Lot 355 DP751388 by title) prepared by Conics and adopted by Council in 2008 and Council officers felt obliged to prepare the planning proposal on the landowner's behalf.



Indicative Structure Plan - Gulmarrad

The DGLMS has not been adopted so there is still opportunity for part of the James Creek land to be included in the initial release. Release of both areas will ensure critical infrastructure has been installed in case population increases are greater than anticipated and the of capital investment will be borne by the developer not Council. All landowners within the "potential urban land release areas in the Mid North Coast Regional Strategy" at James Creek have objected to the DGLMS. Objections have been submitted to Council regarding the Draft Local growth management strategy and at this point in time the matter has not been brought before Council. In the author's opinion, there are inconsistences in the DGLMS and the document requires a total review prior to adoption. Of particular note is the inconsistencies applied with regard to buffers from cane land.

The owners of cane farm within DP1154565 (shown above) have objected to the DLGMS as at the public meeting they were advised that "their land would be utilised as a buffer." From the author's understanding the document "Living and Working in Rural Areas" was produced to address the conflict issues that arise between conflicting land uses. In my opinion the onus of providing a buffer is on the developer and Council has no current legislative power to prevent an existing cane farmer from continuing this land use. The conflict arising from the proposed residential use adjacent to the existing cane farm at

Gulmarrad had not been sufficiently addressed in the DLGMS. The indicative structure plan for Gulmarrad from the Draft LGMS places the proposed residential development adjacent to an existing cane pad as illustrated in the indicative structure plan above.

The DLGMS states, with respect to James Creek, "If for the purposes of this discussion paper, the suggested 300m agricultural buffer is adopted as a key constraint, and if existing vegetation is protected, the resultant developable area is approximately 28.7 ha."(Geolink, Draft LGMS, 72) Please note the 300m buffer referred to is from cane land.

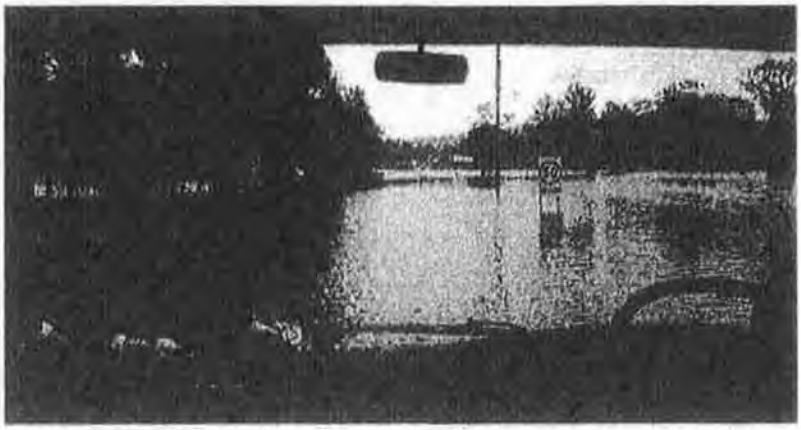
It further states" In this regard, the Handbook suggests that, as a starting point, a separation buffer of 300m should be applied between urban development and sugar cane cropping and horticulture" (Geolink, Draft LGMS, 72) The Handbook referred to is Living and working in Rural areas.

The topography of James Creek is illustrated in the contoured aerial photograph obtained from the RTA provided below. The lands are the first high ground west of Yamba and are at an elevation of approximately 10- 13 metres above the adjoining cane land. This natural topographical feature is an ideal buffer to reduce the impact on the proposed residential development from the impacts of noise, spray drift, and smoke generated by the adjoining cane cultivation activities.

As stated in the "Living and working in Rural Areas" document "It is acknowledged that appropriate buffer distances may vary between councils based on local topographic, climate, environmental and social situations." The minimum buffers recommended are not intended to take the place of local council policy on buffers, setbacks etc, where such policy has been developed and adopted."

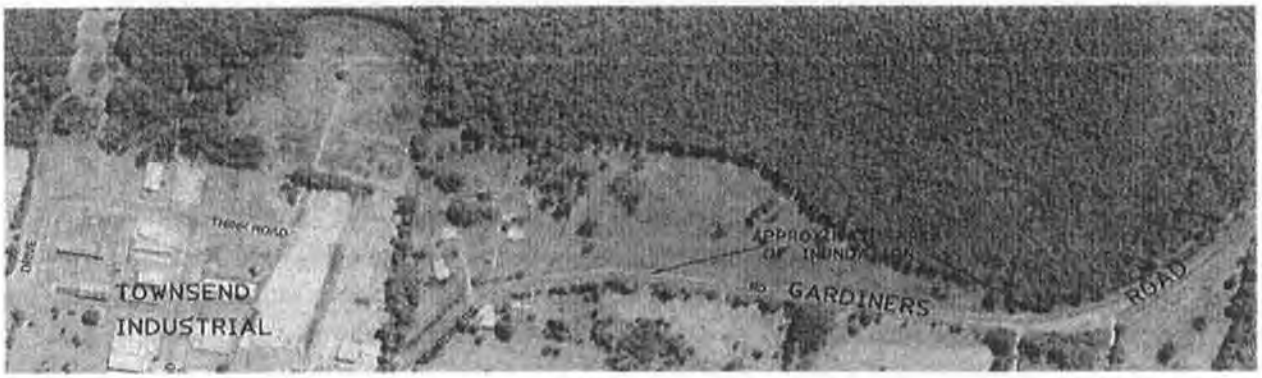
In the DLGM's overview of constraints regarding James Creek "The Gardiners Road access to the site is flood affected."(Geolink, DLGMS, 72) Also, "Proceeding with development at James Creek would require the raising of sections of Gardiner's Road to provide acceptable flood immunity" (Geolink, Draft LGMS, 56)

The Draft LGMS's Preliminary Drainage Study included a photograph of a view looking west along the relevant flood affected part of Gardiners Road during the May 2009 affected by flood. (below)

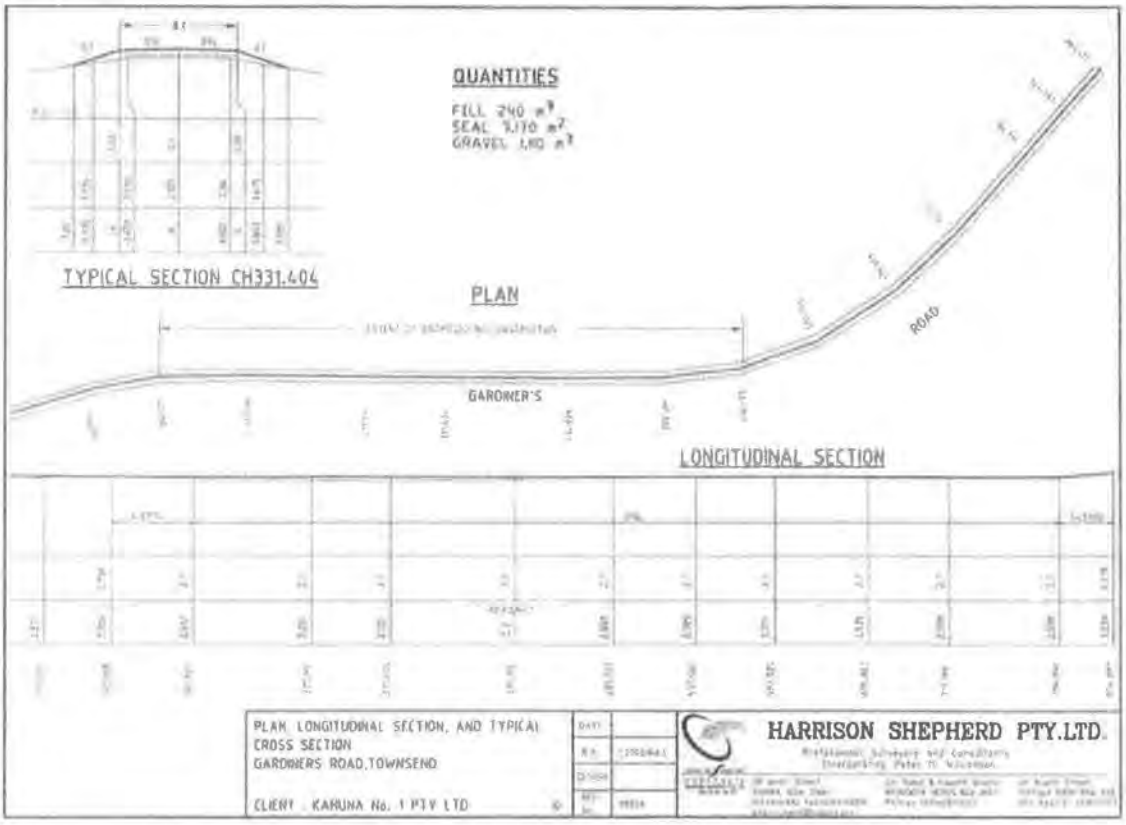


Jim Spencer of Council's engineering department has advised that this 2009 flood was estimated to be a 1 in 25 year flood event. He has further advised that highways are usually designed to a 1 in 20 year event. So the photograph refers to an extreme flood event and a flood of higher intensity than the 1 in 20 design level required if the road is considered as a Highway.

Discussions with locals at James Creek revealed that the water over this part of James Creek road in flood is not very deep, and so a survey of this part of the road was undertaken in January 2011.



From Council's current flood levels- the 1 in 20 year flood level for this area is 2.5 to 2.6m AHD. For analytical purposes we have prepared a design longitudinal section with a design reduced level of 2.7 metres AHD- that is, 100mm above the 1 in 20 year event.



The above longitudinal section illustrates the existing centreline levels in relation to a design level of 2.7 metres AHD and shows that approximately 400 metres of this road is inundated in a 1 in 20 year event. The DLGMS's Drainage Study states " The key drainage issues in the Townsend locality are those listed below....Overtopping of a relatively long stretch of Gardiners Road (up to 800m), due to water backing up from the Yaegl Nature Reserve as a result of broad-scale river flooding."(Geolink, Preliminary Drainage Study, 18) The above plan demonstrates that the area in question is inundated to RL 2.7mAHD for a length of about 400 metres not 800 metres.

Based on the estimated quantities and the following approximate costs:

240 m^3 Fill @ \$40/m^3	\$9,600
3170m^2 Two coat Seal @ \$10/m^2	\$31,700
1110m^3 Gravel @\$120/m^3	\$133,200

Total Estimated Cost: $174,500

An estimate of cost to raise this part of Gardiners Road to RL 2.7mAHD is indicated above.

Gardiners Road is a major link between Yamba and the Townsend Industrial area. This road links these two industrial/employment areas and so investment in the raising of Gardiners Road will not only benefit any proposed residential development in the area but also local Business and Industrial sectors.

The developer of Lot 104 DP751388 is willing to forward fund critical infrastructure for the vicinity. These costs can be discounted from future Section 64 and section 94 contributions to the value of the works provided.

Current legislation requires "provision of infrastructure" or "having satisfactory arrangements made" prior to development consent being issued. Infrastructure design and provisioning is a lengthy process and if the DLGMS's suggestion that James Creek be reassessed in five years is agreed to, it will further delay any potential residential development at James Creek and may force the developers to invest their funds in an alternative local government area.

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

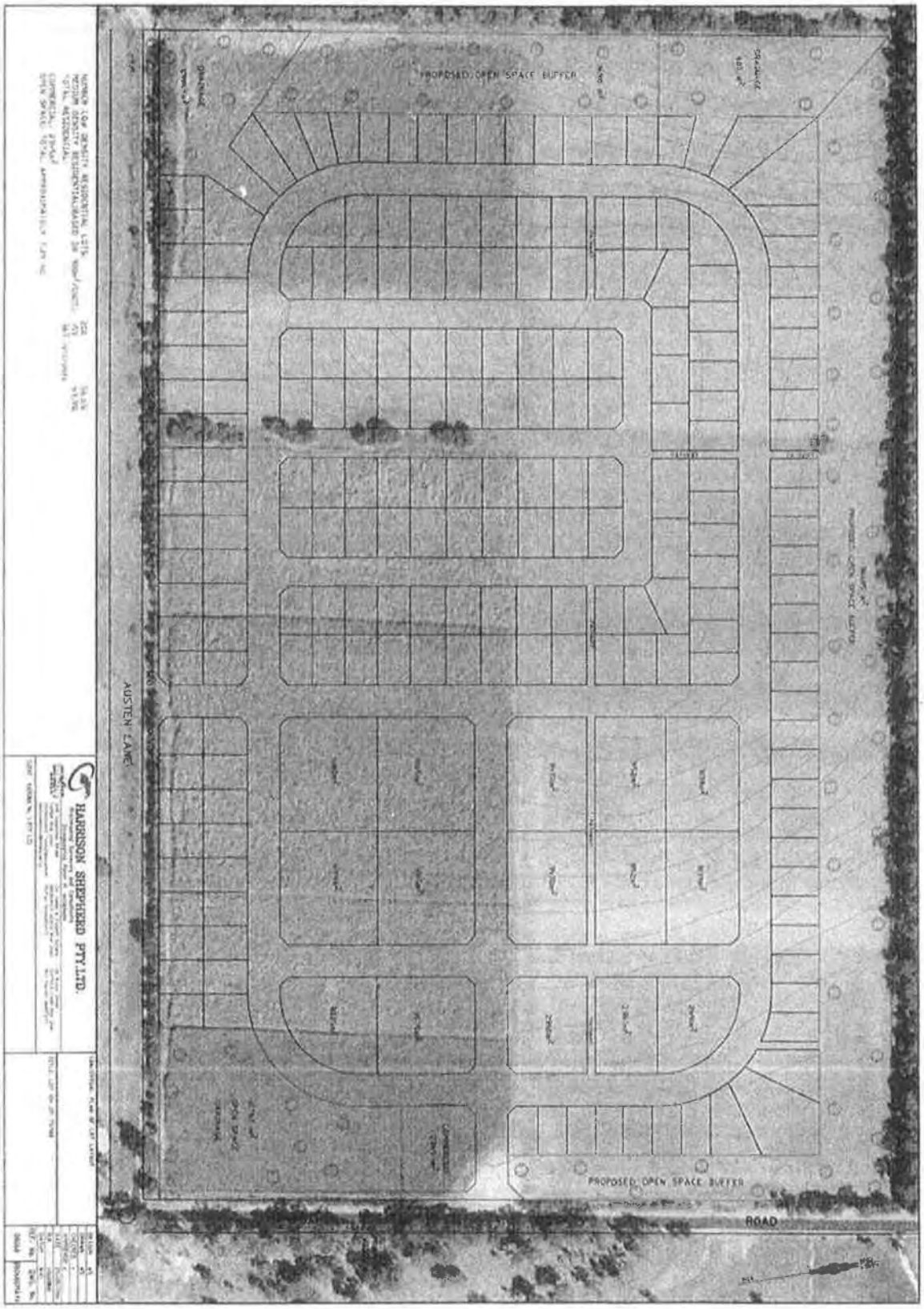
The planning proposal is the simplest way under the current legislative system to achieve the rezoning of the subject land. The planning proposal is not consistent with the DGLMS, however, if Council supports this planning proposal there is still opportunity for the subject land to be included in the initial release areas in the adopted Local Growth Management Strategy.

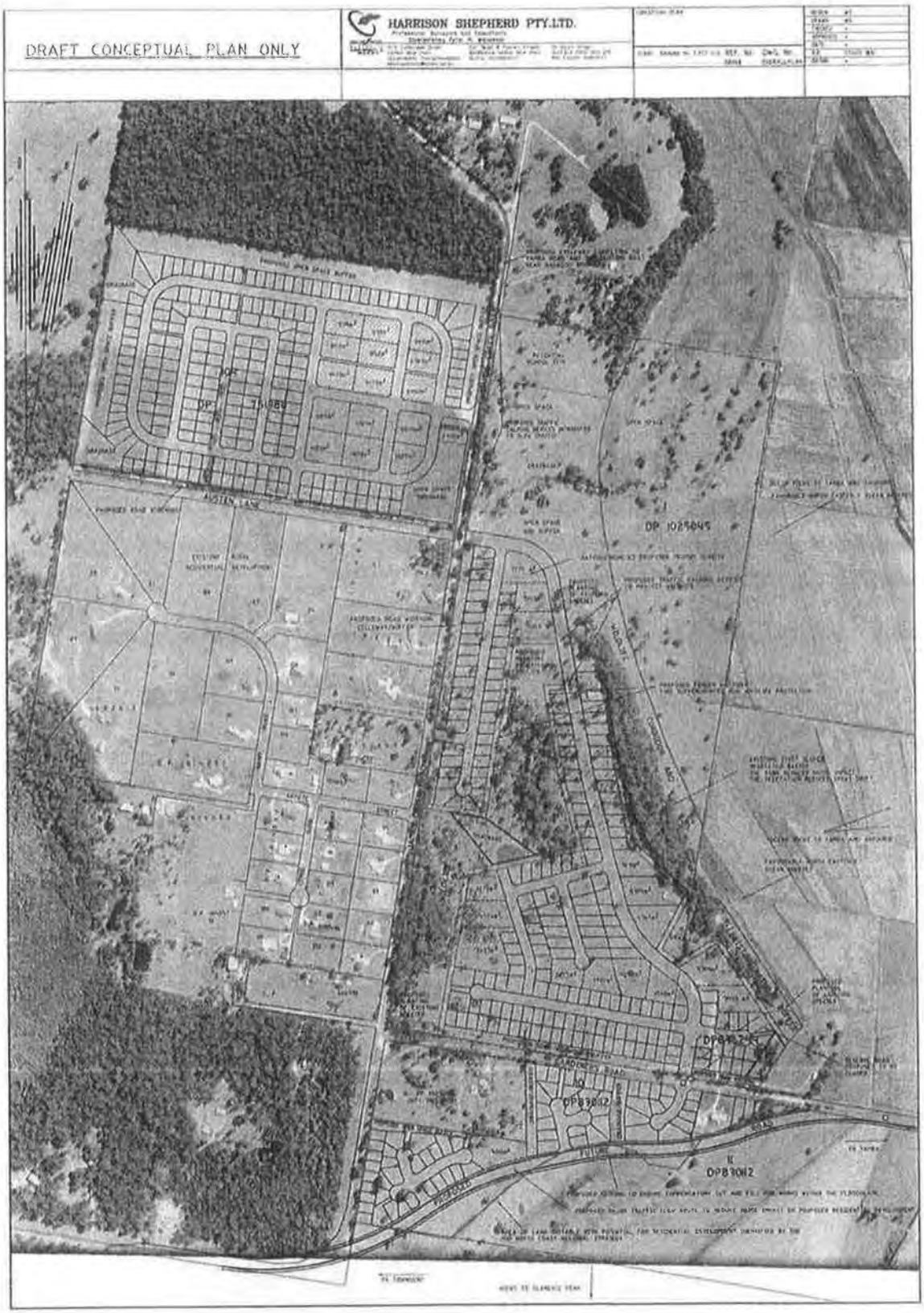
The indicative structure plan proposed within the DGLMS identifies only three allotments within the Gulmarrad vicinity as suitable for residential development to cater for the anticipated popluation growth- Lot 355 DP751388 (referred to as Lot 2 DP1036498), Lot 71 DP1156995 and Lot 1020 DP1108597. There is no guarantee that the owners of Lot 71 DP1156995 or Lot 1020 DP110859 will lodge planning proposals or proceed with development of the subject lands.

Traditionally land has been released in stages so public infrastructure that is paid for by the "public purse" is not left dormant. This methodology involves the government estimating the future population for an area and releasing a limited number of lots to ensure the infrastructure Council has invested in is not left dormant. By the same token, if Council installs public infrastructure and developers are unwilling to undertake subdivision works Council not only bears the costs of the installation and interest payable on any borrowings,

but stands to gain no income until the particular vicinity is developed. In the James Creek scenario this situation will not occur as the Developer is willing to forward fund infrastructure costs while Council still stands to benefit from the income it receives from the newly created lots.

We provide an indicative concept plan for the subject land and also a conceptual plan for the James Creek vicinity. Please note, these plans are conceptual only.


PROPOSED OPEN SPACE BUFFER
AUSTEN LANE
PROPOSED OPEN SPACE BUFFER
ROAD
HARRISON SHEPHERD PTY LTD


DRAFT CONCEPTUAL PLAN ONLY
HARRISON SHEPHERD PTY.LTD.
DP 1025045
DP838012
DP838012

4.3 Is there a net community benefit?

i) The primary net community benefit reaped by the proposal is the willingness of the developer to forward fund infrastructure costs. Traditionally Council has funded the infrastructure for future growth areas. Funds were generally borrowed so an interest factor was applied to the borrowed sums. With the developer forward funding infrastructure costs Council funds are not diverted to the future development areas but are available for other existing community requirements. Under the Mid North Coast Regional Strategy – "Where development or rezoning increases the need for State Infrastructure, the Minister for Planning may require a contribution to the infrastructure having regard to the NSW Government State Infrastructure Strategy and equity considerations." The developer's willingness to contribute to the State Infrastructure is the primary net public benefit reaped by this proposal as in essence the developer is investing in Clarence Valley Council's assets and the funds invested and the risk of the investment are both borne by the developer.

ii) The developer forward funding the provision of infrastructure will provide an opportunity for existing problems in the James Creek vicinity to be addressed in the near future rather than when funds become available.

Part of James Creek road which connects to Yamba Road is unsealed as indicated below.

In 2006 Council acquired lands adjoining the James Creek road reserve (see part of DP 1093910) to create a wider road and safer traffic route.

In 2007 council issued Consent DA2007/371 including the following condition No.36 which required the sealing of this part of James Creek Road.

Roadworks

36 The applicant shall provide full width rural road re-construction of James Creek Road from the intersection of James Creek Road and Yamba Road to and along the subject property frontage. This shall be a minimum 6m wide primer seal 7mm plus 2 coat seal 14/7mm with 6 month maintenance bond in accordance with NRDC. This shall include design calculations for and any necessary upgrade of existing stormwater drainage cross-culverts. Intersections shall be upgraded in accordance with Austroads Part 5 – Intersections at Grade. The design of the access is to clearly demonstrate that the access complies with AS2890 particularly with regard to sight distance and the sight distance for a rural road.

Unfortunately, the owner successfully appealed this condition and the condition was subsequently removed.

Photograph taken by the author on the 16th January, 2011

Works along James Creek Road will involve the sealing of the gravel road and construction of drainage culverts. To date, this part of James Creek Road has not been sealed. If the rezoning is approved the developer is willing to undertake the required works which may speed up the process of resolving local traffic issues and hopefully avoid situations as indicated above.

iii) A net community benefit arises from the simultaneous release of James Creek and Gulmarrad in the form of a "wider distribution of the future traffic flow." As it stands if the DGLMS is adopted and the future population growth only occurs at Gulmarrad there is only one direct route from Gulmarrad to Maclean-via the Cameron Street intersection. The DGLMS states "The Cameron/Jubilee intersection is also currently at capacity, with significant constraints to upgrade options." (Geolink, Draft Local Growth Management Strategy, 31)

If development at James Creek proceeds simultaneously with the development of Lot 2 DP1043698 at Gulmarrad rather than only at Gulmarrad the negative impact created by the potential increased traffic flow at the Cameron Street intersection will be substantially reduced as the majority of James Creek residents travelling to Maclean will use the James Creek/ Yamba Road route.

iv) The DGLMS proposes rezoning of three blocks of land at Gulmarrad to satisfy the anticipated future demand for land over the next twenty five years. A planning proposal has been prepared by Council on behalf of Lanai Pty Ltd's over Lot 2 DP1043698. (Lot 355 DP751388) As far as the author is aware, the other lands proposed to be rezoned residential in the indicative structure plan namely Lot 1020, DP DP1108597 and Lot 71 DP 11556995 presently have had no planning proposal lodged with Council.

If Council elects to adopt the DGLMS and Lanai's planning proposal as they stand Lanai Pty Ltd will initially have a monopoly on the urban release areas in the Maclean catchment. The major disadvantage of a monopoly is the ability of developer to set the sale price of land as there is no direct competition. There is no guarantee that the owners of Lot 71 and Lot 1020 will lodge planning proposals so this restricted market could remain in the Maclean Catchment for years.

If the subject land is included in the initial release of urban land for the Maclean Catchment along with Lanai Pty Ltd's land a net community benefit is reaped as the "monopoly" situation is removed. The benefits to the community are backed by the commitment of two active developers- one at James Creek and one at Gulmarrad wanting to proceed with development simultaneously. Having more than one active developer will provide purchasers choice, create competition and will potentially lead to price reductions in the

cost of the final land parcel as they compete for sales. The same situation exists at Grafton where Clarenza and Junction Hill compete against one another in the real estate market.

v) Commitment by developers to invest in infrastructure and undertake development in the local region will create employment opportunity in our local area. Part of CVC's" The State of the environment report 2009/2010"below illustrates the reduction in the number of building approvals over the last five financial years. These figures are frightening for anyone in the building industry.

Environmental Indicator	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Urban area	39.41 km2	39.41 km2	39.41 km2	39.41km2	39.41km2	39.41km2
Dwelling approvals	404	245	1107	283	255	248

Source: SOE Supplementary Report 2009/2010

http://soe0910.clarence.nsw.gov.au/cmst/cvc006/view_doc2.asp?id=2394&cat=1te

As a nation we have all suffered from the Global Financial Crisis. Nationally, the building industry is still stagnant. Large numbers of local tradespeople have been forced to move away to find employment opportunity elsewhere. Council should seriously consider how fortunate we are to have developers willing to invest in the Clarence Valley Council's infrastructure and invest during this downturn in the economy. Employment opportunity created from this investment will benefit both existing and future residents of the vicinity.

vi) Inclusion of both the subject land and Lanai's land will more than adequately provide for the future population growth as predicted by the DLGMS. The simultaneous release of both James Creek and Gulmarrad will initiate infrastructure provisioning to both these areas. This will in turn ensure that the Maclean catchment will be able to provide more urban land if we are subjected to a greater than predicted increase in population.

The world's population is expected to almost double in 20 years. The percentage of this increased population who will elect to live in the Maclean catchment is difficult to predict. If an opportunity to develop both areas with developer's contributions exists now it is paramount that Council seriously consider the matter as the alternative may be to solely rely on the traditional means of funding by the "public purse".

If the DGLMS is adopted as it stands and there is a greater demand for land in the Maclean catchment, the opportunity for developers to contribute toward infrastructure at James Creek may have been lost. The owner of the subject land has already incurred holding costs while they have awaited the release of the Mid North Coast Regional Strategy and then the DGLMS. They are unwilling to wait another five years for a "rethink" and if development at

James Creek does not proceed in the near future they will be investing their funds in an alternative Local Government Area.

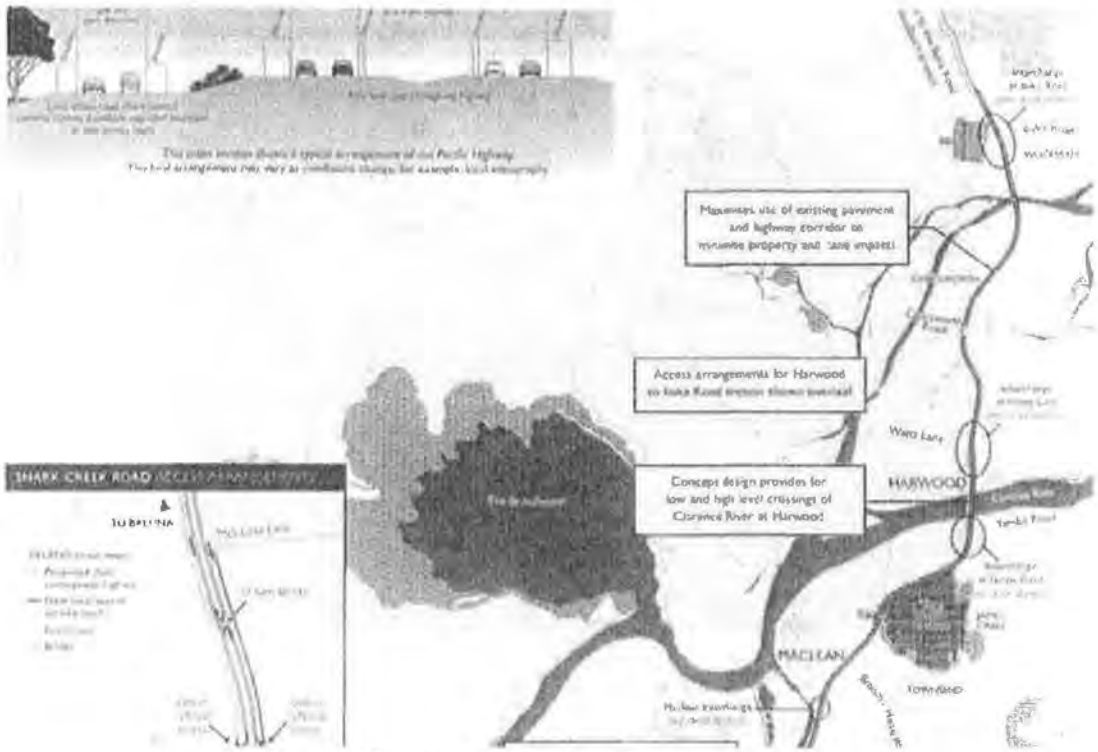
vii) The close proximity of the development to the Clarence River provides a net community benefit in terms of the cost of the provision of recreational facilities. The subject land is approximately 2.5 kilometres from an existing boat ramp and picnic facilities. The proposed road upgrade of James Creek can incorporate the provision of a cycleway/pathway to these facilities so residents can enjoy "The Clarence" - fishing, skiing, boating or just "walking to and sitting on the river bank." These existing facilities will enable residents to enjoy "The Clarence" nearby. The net community benefits include a reduced expenditure on the provision of community facilities as there are already existing facilities in the vicinity and a reduction in reliance on fossil fuels as people are able to undertake a range of leisure activities in their local area.

Existing Picnic Facilities

Existing Boat Ramp

viii) The underside of the Harwood Bridge acts as a meeting place/carpark for picking up/ meeting or carpooling for people travelling up and down the Pacific Highway.

The Clover Leaf and the Harwood Bridge will form part of the Pacific Highway upgrade which will include a new bridge and elevated on/off ramps as indicated on a part of an RTA diagram of the "Wells crossing to Iluka" Highway realignment below.



Source: www.rta.nsw.gov.au

There is a net public benefit for the James Creek area to be considered in the near future rather than later as the RTA's highway design can incorporate potential traffic flows/carparking/intersection design etc. requirements now prior construction of the Highway rather than later, post construction.

The Mid North Coast Regional Strategy recognises James Creek as a "potential" Urban growth area. The DLGMS's failure to include James Creek in the earlier stages of development may detrimentally affect the funding available to Council for roadworks/ intersection/boat parking facilities at the Harwood Bridge/Pacific Highway/Yamba Road intersections if it is decided that development at James Creek should be reconsidered in another five years. Federal and State government funds utilised in the design and construction of the Pacific Highway will only be available until the highway is constructed. Highway designs must incorporate local transportation issues. If the RTA considers that James Creek is only a " Pie in the Sky idea" it may prove to be extremely costly for Council to retrospectively adjust the local road networks to match the "constructed highway" at a later date.

ix) A net public benefit is obtained as James Creek is in close proximity to a variety of places of employment reducing the reliance on fossil fuels. The DLGMS fails to recognise that James Creek is between two employment centres- Yamba and Maclean. Places of employment and their respective distances from the subject land are indicated below.

Townsend Industrial (4 kms), Harwood Sugar Mill (6kms),Maclean CBD (8kms), Yamba Industrial (15kms),Clarence River (2.5 kms) – Fishing,Tourism

The Clarence River Way 2010 promotes the Clarence River as a Tourist Attraction. Investigations are currently underway to assess the potential of Yamba becoming a Customs Port. This accreditation If attained may transform Yamba into an International Tourist Destination providing a major increase in local employment opportunity. Yamba is the opening of the mouth of the Clarence River so the benefits of increased employment opportunity will also flow 'up river'.

" The NSW Government's goal is to increase total tourist visitor nights per year to 160.6 million and tourist spending in NSW to $19.2 billion a year by 2016. It is estimated that this would create more than 23,000 extra direct jobs for workers and families. Currently tourism

contributes $27 billion to the State's economy and an estimated 267,000 direct and indirect jobs."(Department of Planning, Providing for Tourism in standard instrument local environmental plans 2009, 1)

x) The close proximity of James Creek to the Clarence River may in the future offer net public benefits if the River is resurrected as a transportation corridor. Traditionally, the Clarence River was alive with business activity as people and provisions were ferried from one end of the river to the other. The river was the major transportation corridor.

State Policies presently focus on the provision of an improved Public transport system. Recently in Sydney the extent and frequency of the existing Ferry system is being overhauled in an attempt to provide an improved public transport system. Technological advances may in the future prove that transportation along the river by ferries or wind/solar-powered vessels will offer a more sustainable or comparatively more economic system than the existing transportation networks which rely solely on the local road networks. James Creek's close proximity to the Clarence River may in future provide opportunity for the provision of a ferry connecting to neighbouring River centres. This form of transport may be more suitable for the aging population undertaking the "Sea Change "to the Clarence Valley.

xi) Another net public benefit arising from the proposed development at James Creek is due to its location and topography. The subject land forms part of the first elevated land west of Yamba and as such, enjoys pleasant ocean breezes. This aspect will reduce the reliance on air conditioning for cooling for any future development.

xii) The proposed urban development at James Creek will provide infrastructure to not only service the proposed lots but the existing rural residential development in the vicinity. The James creek vicinity is predominantly rural or rural residential development. It is recognised that rural residential development is "unsustainable development" as the cost of service and infrastructure provision to these rural communities is uneconomical. More roads have to be maintained for fewer people, there are inadequate funds from section 94 contributions for the provision of Open space and Community facilities and no Section 64 contributions for the provision of sewer. The infrastructure installed will benefit all members of the James Creek Community and any other member of the public travelling through the vicinity.

5. RELATIONSHIP TO STRATEGIC PLANNING FRAMEWORK

5.1 Applicable Regional Strategy- Mid North Coast Regional Strategy

As previously stated the proposal is consistent with the Mid North Coast Regional Strategy. With such a small local community as James Creek it is feasible to promote "Growth of inland towns and villages where extra population is needed to make existing services more viable if the risk of environmental degradation is low" (Mid North Coast Regional Strategy (MNCR Strategy 2009) The MNCR Strategy identified over 100 hectares of land in the James Creek area within the growth areas suitable for further investigation. Preliminary ecological studies identify the existence of old growth trees in the vicinity. The subject land contains no old growth trees and is predominantly cleared. There is sufficient land within the growth areas at James Creek to create a unique living environment while preserving and protecting the natural environment.

Existing recent rural residential subdivision south of the subject site.

5.2 Consistency with Council's Community Strategic Plan, or other local strategic plan.

Valley Vision 2020, July 2008, is Councils adopted corporate strategic plan adopted in 2008.

The vision: "A sustainable Clarence Valley: Life in the Clarence, now and in the future, is based on a culture of living sustainably that protects and carefully utilises the natural environment, its beauty and resources, our cultural heritage and unique identity of our valley and its communities. "

Some of the Sustainability Principles:

- Protecting ecological processes and Biodiversity

  The proposed development provides open space buffers surrounding denser footprints of development allowing integration of the living environment with the natural environment and ensuring a larger open space network for the purification of stormwater runoff and protection of the existing ecosystems.

- Supporting Social and intergenerational equity

James Creek is near the town of Maclean which provides numerous key services and facilities. The proposed development shall provide a range of housing options enabling greater opportunity for younger generations.

- Promoting ecological sustainability

  Development at James Creek is aimed at "creating human habitat" that is attractive while protecting the environment.

(CVC, Valley Vision 2020, 18)

Valley Vision's critical strategic issues for 2008/10 include Financial Sustainability & Risk Management.

Serious consideration should be given by Council as to whether it is riskier to enable all development to occur in Gulmarrad – where there is one willing developer and potential for the creation of a monopoly or to release James Creek and Gulmarrad where there are two willing contributing developers and competition has been created.

5.3 Consistency with applicable State Environmental Planning Policies

See part 9 of this document

5.4 Consistency with applicable Ministerial Directions (s 117 directions)

See part 10 of this document.

6. ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACT

6.1 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?

The attached Fauna and Flora study (Annexure D) prepared by James warren and Associates addresses Fauna and Flora issues relating to the site.

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

Urban development will potentially create runoff which may adversely affect the natural environment. The large expanse of urban development will be surrounded by avenues of open space which will contain:-

i) vegetated buffers for screening and separation from the adjoining land uses;
ii) planting of these spaces with species native to the site;
iii) the installation of stormwater detention devices to ensure pre and post development flows remain the same;
iv) provision of water sensitive urban design devices such as swales to cleanse stormwater and the installation of water purification devices to ensure stormwater runoff will not adversely affect the existing ecosystems;
v) bush-tracks, picnic tables, and other parkland furniture within these corridors for the community and the public at large to enjoy.
vi) Controls for these systems can be implemented through the site specific Development Control Plans.

As part of the upgrade of James Creek it is envisioned that beautification and reestablishment of the native vegetation be undertaken along the foreshore of James Creek.

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

The subject land is in close proximity to Maclean. The proposed mixture of medium and low density residential development will ensure social services from Maclean to the vicinity will be economical. The mixed densities will provide opportunity for a variety of housing types and provide choice for residents to cater both for the aging population and the changing demographics affecting housing, such as, the increase in single parent families.

7. STATE AND COMMONWEALTH INTERESTS

7.1 Is there adequate public infrastructure for the planning proposal?

i) Water

A 100 mm water main goes past the subject land while a 300 mm water main (the main trunk line to Yamba) is located along Yamba Road to the north of the subject land. Development at James Creek would require the connection of the 100mm main to the 300 mm main.

At present, as the 100mm main services the Rural Residential development south of the subject land. It is not in a closed loop so any break in the 100 mm main can result in all the properties within the James Creek rural residential subdivision being without water. The closure of the loop by the extension of the 100 mm line to the 300 mm main on Yamba Road will remove this problem as the loop will be closed.

ii) Sewer

There is currently no sewer available in the James Creek Vicinity. The developer is willing to forward fund the provision of sewer to the vicinity. Clarence Valley Council has been awaiting the provision of funding for sewer for months for Iluka and West Yamba. Councillors are aware of how long this wait has been, along with the residents who have constantly complained about the delays. Funding for sewer has predominantly been from government grants and borrowed funds. Councils is committed to the providing sewer to Iluka and then West Yamba before any of the Maclean Catchment growth areas can be funded. Greg Mashiah (CVC) has advised that based on CVC's current commitments to sewer Iluka and West Yamba no further funding will be available for fifteen to twenty years for the Maclean urban release areas. Greg has also provided an estimated sewer cost for James Creek below. There may be cost advantages if sewer is designed/installed for both James Creek and Gulmarrad simultaneously.

"Wendy
It appears that an estimate of costs for servicing James Creek was not included in the LGMS. The methodology applied for Gulmarrad was:

"The estimated costs using the NSW Reference Rates Manual (1993), which Office of Water has advised need to be multiplied by 1.32 to June 2008:

a) Pump Station to service 750 tenements
Average Dry Weather flow = 0.0111/s tenement = 8.25L/s
Assuming pressure sewer is used (due to relatively flat terrain at Gulmarrad & James Creek), Design Flow = 3x ADWF = 25L/s
>From Table 3.8, for head = 25m, Pump Station = $215,000 x 1.32 = $0.284 million

b) STP Augmentation for 4000EP
>From Table 3.12, Aeration box = $1.98 million
>From Table 3.11, Sludge lagoon = $125,000
Total = $2.123 million x 1.32 = $2.802 million

c) Rising Main
>From Table 3.7, 100mm RM = $82/m
Distance from Sheehans Lane to existing reticulation = 1850m.
For Gulmarrad, estimated cost = $151,700 x 1.32 = $0.220 million

Total cost (June 2008) is $3.31 million

CPI adjustment to June 2010 is multiply by 1.05 which gives $3.47 million.

We would also need to upgrade the pumps at SPS9 (Townsend) and SPS 8 (Maclean Showground), so say $4 million."

Assuming the rising main follows the road reserve, the distance from the corner of Lot 104 DP751388 to the connection point is 4800m. The estimated (June 2008) cost of item c) for James Creek is therefore 4800m x $82/m x 1.32 - $520,000.

The "standalone" components for James Creek (June 2008) would therefore be Pump Station - $284,000 and rising main = $520,000 = $804,000 x 1.05 (June 2010)= $844,000. The estimated $3.5 million cost for the STP augmentation and the upgrade of SPS9 and SPS8 would be shared between James Creek and Gulmarrad.

There are obviously very rough budget costs at this stage.
Regards
Greg Mashiah
Manager Water Cycle
Clarence Valley Council

iii) Cycleway/ Walkway

As part of the upgrade of the James Creek road it is a cycle/walkway can be constructed from the subject land to the Yamba road intersection and beyond to the existing boat ramp and facilities on the Clarence River. In the long term it is envisioned that a cycleway could link Yamba to Maclean. At present the roadway between Yamba and Maclean is not a safe traffic route for the many cyclists who undertake the treacherous journey.

iv) Garbage Collection Services

Council officers advised in January 2011 that James Creek had 80 dwellings with garbage collection services provided by Council. Based on a population of 2.6 persons per dwelling the estimated population is about 208 people.

v) Schools

There are no schools in the James Creek vicinity, however, it is anticipated that future population growth in the vicinity may create a need for a local primary school. There are existing bus services to the local schools at Maclean, Yamba, Palmers Island, Harwood and Grafton. Schools available in the area include small village type schools, religious schools, large state primary and high schools. There are a variety of available schools in the region providing the parents of school age children with "choice" for their child's education. The close link to the Pacific Highway also provides a convenient drop off point (at the Harwood Bridge) for those children attending the various boarding schools up and down the coast. School buses already frequent James Creek and a regular bus service travels between Maclean and Yamba along Yamba Road.

vi) Hospitals and local Health services

Maclean has a hospital and a variety of community health services.

7.2 What at the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

Initial discussions with the Department of Planning revealed that at this point in time it was up to Council to decide whether or not to adopt the Draft Local growth management strategy as it stands.

State government policies at present are geared toward Housing Affordability. If the objectives of the Housing Affordability policies are to be achieved we need to increase competition and allow the housing market to operate in a "Laissez- Faire" environment by reducing government intervention in the supply of available land. The "public purse" may no longer be the major funding source for hard state infrastructure as has been the tradition in the past. Government departments have a duty to comply with their obligations under the Fiscal Responsibility Act 2005 and so if it is not feasible to borrow for the construction of sewer at James Creek or Gulmarrad in the short term the only alternative is to rely on the private sector to provide the necessary infrastructure. If Council is unable to fund infrastructure but elects to delay progress where a developer is willing to install infrastructure the costs of the delays will ultimately be added to the final sale price of the land.

8. COMMUNITY CONSULTATION

At this point in time no community consultation has been undertaken regarding this proposal. Community consultation was undertaken for the DLGMS, however, at this point the matter of adoption of the DGLMS has not been brought before Council.

9. STATE ENVIRONMENTAL PLANNING POLICIES

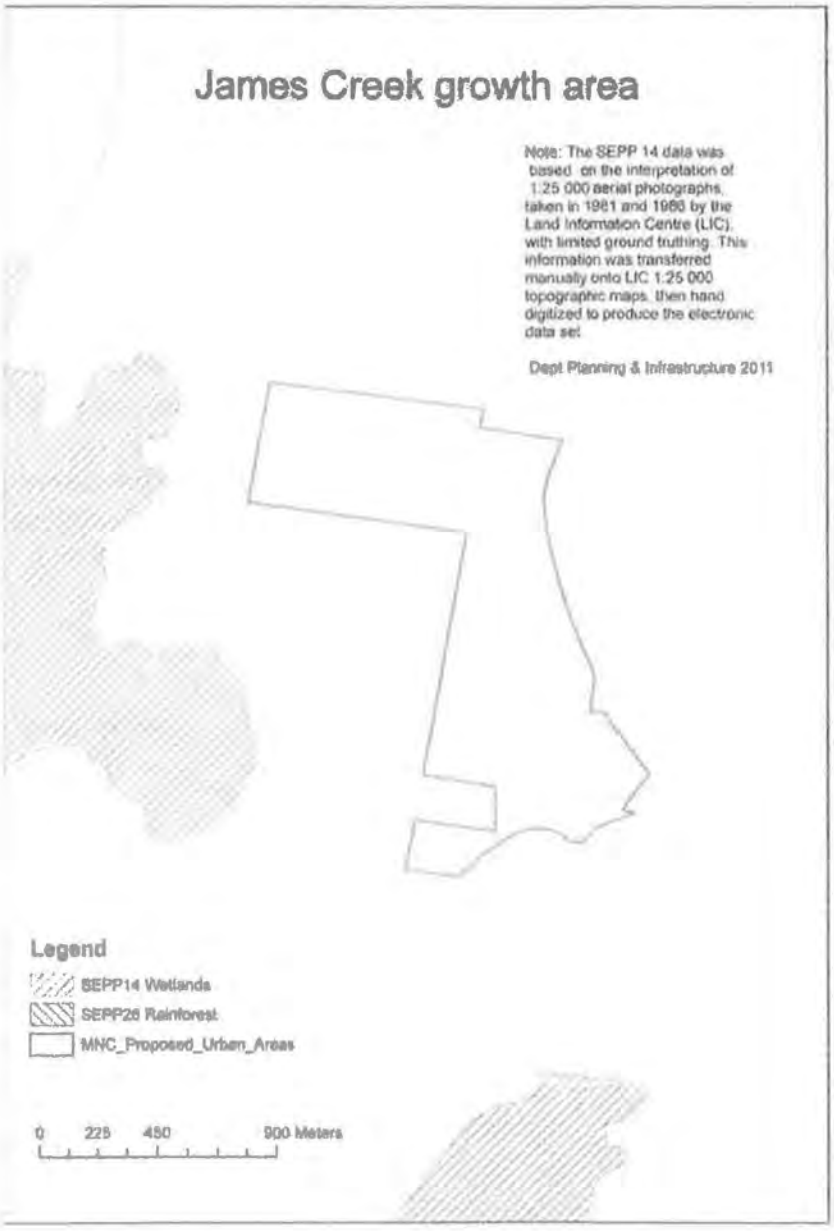
STATE ENVIRONMENTAL PLANNING POLICY	COMPLIANCE	COMMENTS
SEPP 1 Development Standards	Not applicable	
SEPP 2 Minimum Standards for residential flat buildings Repealed by SEPP 20	Repealed	
SEPP 3 Castlereagh Liquid Waste Depot	Not Applicable	
SEPP 4 Development without consent and Miscellaneous Complying and exempt development	Not Applicable	
SEPP 5 Housing for People with a disability	Repealed	
SEPP 6 Number of storeys in a building	Not Applicable	
SEPP 7 Port Kembla Coal Loader	Not applicable	
SEPP 8 Surplus Public Land	Not Applicable	
SEPP 9 Group homes		
SEPP 10 Retention on low cost rental accommodation	Not Applicable	
SEPP 11 Traffic Generating Developments	To be determined	Study undertaken as part of the DLGMS
SEPP 12 public Housing (dwelling houses	Repealed	
SEPP 13 Sydney Heliport) Repealed by Sydney REP 26	Repealed	
SEPP 14 Coastal Wetlands	Not Applicable	See 9.14
SEPP 15 Rural Land sharing Communities	Not applicable	
SEPP 16 Tertiary Institutions	Not applicable	
SEPP 17 Design of Buildings In Certain business centres	Did not proceed	
SEPP 18 Public housing	Not applicable	
SEPP 19 Bushland in Urban Areas		
SEPP 20 Minimum Standards for Residential flat buildings. Repealed by SEPP 53	Repealed	
SEPP 21 Caravan Parks	Not applicable	

STATE ENVIRONMENTAL PLANNING POLICY	COMPLIANCE	COMMENTS
SEPP 22 Shops and Commercial Premises		
SEPP 23	Not allocated	
SEPP 24 State Roads	Did not proceed	
SEPP 25 Residential Allotment sizes. Repealed by SEPP 53		
SEPP 26 Littoral Rainforests	Not Applicable	See 9.14
SEPP 27 Prison Sites	Not Applicable	
SEPP 28 Town houses & Villa Houses. Repealed by SEPP 25	Repealed	
SEPP 29 Western Sydney Recreation Area.	Not Applicable	
SEPP 30 Intensive agriculture	Not Applicable	
SEPP 31 Sydney(Kingsford Smith) Airport	Not Applicable	
SEPP 32 Urban Consolidation (Redevelopment of Urban Land)	Not Applicable	
SEPP 33 Hazardous and offensive Development	Not Applicable	
SEPP 34 Major Employment Generating Industrial Development	Not Applicable	
SEPP 35 Maintenance Dredging of Tidal Waters	Not Applicable	
SEPP 36 Manufactured Home Estates	Not Applicable	
SEPP 37 Continued Mines & Extractive Industries	Not Applicable	
SEPP 38 Olympic Games & Related Projects	Repealed	
SEPP 39 Split Island Bird Habitat	Not Applicable	
SEPP 40 Sewerage Works	Did not proceed	
SEPP 41 Casino/Entertainment Complex	Not applicable	
SEPP 42 Multiple Occupancy and Rural Land	Not Applicable	
SEPP 43 New South Railway	Not Applicable	
SEPP 44 Koala Habitat Protection	Not Applicable	Subject land not identified as a Koala Habitat- See Report Annexure F
SEPP 45 Permissibility of Mining	Not Applicable	

SEPP 46 Protection & Management of Native vegetation	Repealed	
SEPP 47 Moore Park Showground	Not Applicable	
SEPP 48 Major Putrescible Landfill Sites	Not Applicable	
SEPP 49 Tourist accommodation in Private Homes	Not Applicable	
SEPP 50 Canal Estate Development	Not applicable	
SEPP 51 Eastern Distributor	Not applicable	
SEPP 52 Farm Dams & Other works in Land & water management areas	Not Applicable	
SEPP 53 Metropolitan Residential Development	Not applicable	
SEPP 54 Northside Storage Tunnel	Not Applicable	
SEPP 55 Remediation of land	Complies	Site is not identified as contaminated site- See Report Annexure G
SEPP 56 Sydney Harbour Foreshores & Tributaries	Not Applicable	
SEPP 57	Not Allocated	
SEPP 58 Protecting Sydney's water Supply	Not Applicable	
SEPP 59 Central western Sydney Economic & Employment Areas	Not Applicable	
SEPP 60 Exempt & Complying Development	Not Applicable	
SEPP 61 Exempt & Complying Development for White Bay & Glebe Island Ports	Not Applicable	
SEPP 62 Sustainable Aquaculture	Not Applicable	
SEPP 63 Major Transport Projects	Not Applicable	
SEPP 64 Advertising & Signage	Yes	No issues arising from the rezoning . Can be addressed in the development stage in relation to any proposed development.
SEPP 65 Design quality of Residential Flat buildings	Not Applicable	
SEPP 67 Macquarie Generation	Not Applicable	

Industrial Development Strategy		
SEPP 68	Not Allocated	
SEPP 69 Major Electricity Supply Projects	Not Applicable	
SEPP 70 Affordable Housing (Revised Schemes)	Not Applicable	
SEPP 71 Coastal Protection	Complies	Master plan to be prepared for entire site prior DA
SEPP 72 Linear Telecommunications Development – Broadband	Not Applicable	
SEPP 73 Kosciusko Ski Resorts	Not Applicable	
SEPP 74 Newcastle Port & Employment Lands	Not Applicable	
SEPP (Seniors Living) 2004	Yes	This SEPP may be applied to sites within the proposal but this will be addressed at the DA stage
SEPP Building Sustainability Index: BASIX 2004	Yes	This SEPP will apply to any future developments within the subject land
SEPP (ARTC Rail Infrastructure) 2004	Not Applicable	
SEPP(Sydney Metropolitan Water Supply) 2004	Not Applicable	
SEPP (Major Projects) 2005	Repealed	

9.14 The below mapping was provided by the Department of Planning and illustrates the SEPP 14 Wetlands and SEPP 26 Littoral Rainforests in relation to the subject land.



10: SECTION 117 DIRECTIONS

SECTION 117 DIRECTION	COMPLIANCE	COMMENTS
1 EMPLOYMENT AND RESOURCES		
1.1 Business and Industrial Zones	Not Applicable	Not within an existing business or Industrial zone
1.2 Rural Zones	Not Applicable	Land is not identified under the Department of Primary industries agricultural land mapping
1.3 Mining, Petroleum Production and Extractive Industries	Noted	Consultation with DPI will occur at Sect 62 Stage
1.4 Oyster Aquaculture	Not Applicable	Not a priority Oyster area
1.5 Rural Lands		
2 ENVIRONMENT AND HERITAGE		
2.1 Environment protection zones	Complies	Not within an Environmental protection zone
2.2 Coastal Protection		
2.3 Heritage conservation	Complies	Addressed in DLGMS
2.4 Recreation Vehicle Areas	Not Applicable	
3 HOUSING, INFRASTRUCTURE AND URBAN DEVELOPMENT		
3.1 Residential Zones	Complies	
3.2 Caravan Parks and manufactured Home estates	Not Applicable	
3.3 Home Occupations	Complies	
3.4 Integrated Land Use and Transport		
3.5 Development near licenced Aerodromes	Not Applicable	
4.HAZARD AND RISK		
4.1 Acid sulphate Soils	Complies	See 10.4.1
4.2 Mine Subsidence and Unstable Land	Not Applicable	
4.3 Flood Prone Land	Complies	See 10.4.3
4.4 Planning for Bushfire Protection	Not Applicable	See 10.4.4

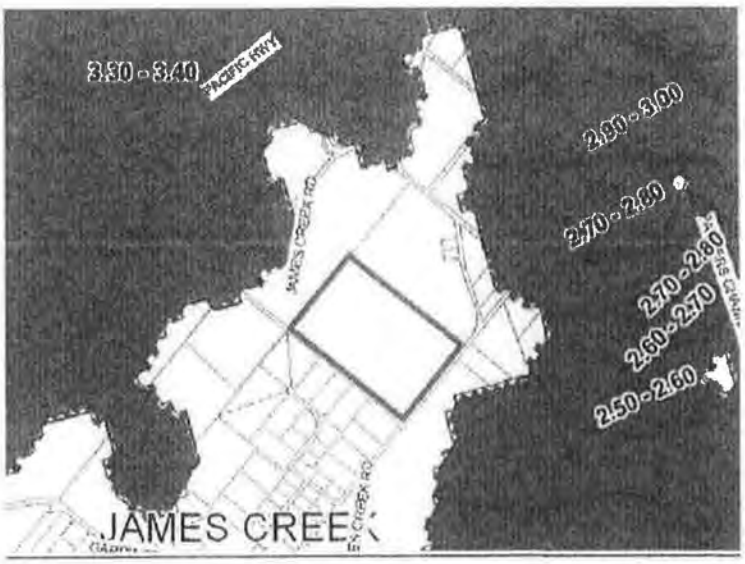
5 REGIONAL PLANNING		
5.1 Implementation of Regional Strategies		
5.2 Sydney Drinking Water Catchments	Not Applicable	
5.3 Farmland of State Significance	Complies	Not within Farmland of State Significance mapped area
5.4 Commercial and Retail development along the Pacific Highway, North Coast	Not Applicable	
5.6 Sydney to Canberra Corridor	Not Applicable	
5.7 Central Coast	Not Applicable	
5.8 Second Sydney Airport: Badgerys Creek	Not Applicable	
6 LOCAL PLAN MAKING		
6.1 Approval and Referral Requirements		
6.2 Reserving land for Public Purpose		No reservations exist on the land.
6.3 Site Specific provisions		
7 METROPOLITAN PLANNING		
7.1 Implementation of the Metropolitan Plan for Sydney 2036	Not Applicable	

10.4.1 Acid Sulphate Soils

The following map was obtained from CVC. The subject land is shown as predominantly Class 5 on the Acid Sulphate Soil Maps.

10.4.3 Flood Prone Land

The diagram below is part of CVC's 1 in 100 year flood level maps. This diagram and the contours illustrated in the conceptual layout plan both indicate that the subject land is not prone to flooding.



10.4.4 Planning for Bushfire Protection

The subject land is indicated above on the CVC's bushfire map. It is not denoted as bushfire prone on these maps.

EXECUTIVE SUMMARY

This planning proposal is consistent with the objectives of the Mid North Coast Regional Strategy. The primary benefits of this proposal are outlined below:-

- The provision of infrastructure in this proposal will be predominantly funded by the developer so both the investment and the risk are worn by the developer. As such, if this planning proposal is adopted by Council they will be adhering to sound risk management principles. The developer's commitment to improve the existing infrastructure will furthermore benefit both local residents and also the general public who elect to utilise the improved infrastructure.
- The provision of local employment opportunity both in the near future and the distant future. The local economy is extremely depressed and if the DLGMS is amended to release land at James Creek in the near future the developer is committed to commence works and boost the local economy. The subject land's location in relation to various places of employment and the Clarence River offer a range of employment opportunities to existing and future residents.
- Provision of an improved distribution of future traffic in comparison to that as proposed by the Draft Local Growth Management Strategy. A large proportion of the future population will utilise the James Creek/Yamba road route to access the major town of Maclean rather than solely relying on the Cameron Street Intersection.
- The release of land at James Creek will remove the monopolistic situation that is created if both the DLGMS and the planning proposal for Lot 2 DP1036498 are adopted simultaneously. It will create a competitive market situation, which in turn will lead to a lowering of land sale prices as developers compete for sales.
- The proposal provides buffers to separate the adjoining land uses and the implementation of measures to ensure protection of existing ecosystems.
- A 40% medium density 60% low density ratio is provided to cater for the aging population and the changing demographics of households.
- The land is flood free land wholly within in the identified growth areas.
- The lands topography and location provide cooling ocean breezes reducing reliance on air conditioning and improving energy efficiency.
- The proposal shall provide improved services and infrastructure to the existing rural residential community at James Creek.
- The recognition of James Creek as an Urban Release Area will ensure the Pacific Highway upgrade will incorporate the James Creek community requirements prior construction rather than post construction.

References:

Mid North Coast Regional Strategy, 2009, Department of Planning

Draft Local Growth Management Strategy, Maclean Urban Catchment, Geolink, 2010

Maclean Shire Council Local Environmental Plan, 2001

Clarence Valley Council Draft Local Environmental Plan, 2010

Preliminary Drainage Study (Draft Local Growth Management Strategy)

Living and Working in Rural Areas, Department of Primary Industries et al, 2009

Clarence Valley Council Webpage www.clarencevalley.nsw.gov.au

ANNEXURES:

A Gulaptis & Smith: "Rezoning at James Creek"

B Mark Burridge & Associates, Sewer Feasibility Report for James Creek

C CVC DMU minutes, Dave Morrison, 2008

D James Warren & Associates, Fauna & Flora Assessment Lot 104, DP751388

E Ron Heron, Aboriginal Cultural site Assessment, 2009

F James Warren & Associates, SEPP44 Assessment for all lands at James Creek, 2010

G EAL Consulting Service, Contaminated land assessment for proposed rezoning, 2011

ANNEXURE 'A'

GULAPTIS & SMITH PTY. LTD.

CONSULTING SURVEYORS

Our Ref: 05192

21 February 2005

The General Manager
Clarence Valley Council
Maclean Office
River Street
MACLEAN NSW 2463

ATTENTION: Mr R Donges & Mr D Morrison

Dear Sir,

RE: REZONING
LOTS 10 & 11 IN DP830112 (O'KEEFFE)
LOT 8 IN DP 836244 (PICKERING)
LOT 104 IN DP 751388) McPHEE/McINTIRE)
LOT 1 IN DP 1025045 (ADAMSON)
LOT 3 IN DP 592726 (GRAYSON)
LOT 3 IN DP 611177 (KATUZANS)
LOT 1 IN DP 377053 (KATUZANS)
LOT 1077 IN DP 1072748 (COMMERFORD)
LOT 2472 IN DP 1071253 (COMMERFORD)
LOT 1033 IN DP 830388 (SHEDDEN)
JAMES CREEK AREA

I refer the meeting held in Maclean on 27 January 2005 with your officers. This meeting discussed my clients' interest in a rezoning of the land from its present zoning of 1 (a) and 1 (b) Rural to a combination of zones which may incorporate 2(a) Residential (Low Density) zone. 2(b) Residential (Medium Density) zone, 3(a) Business Zone and 5(a) Special Uses Zone as further investigation would reveal.

My clients would like to formally ask Council to commence the process of study which is needed to preceed a rezoning of the land. We enclose our clients' cheque for $2000.00 being the rezoning application fee. We understand that the application fee relates to the first 20 hours of staff time and that additional fees and charges may be required. We ask that if additional fees are necessary that Council advise us of an estimate of these prior to undertaking such work.

Interest by various local bodies and individuals. discussions with Council's officers and a preliminary analysis of the land suggest that better uses for the land which appear quite feasible would result from a change of zoning to more intensive and productive uses as suggested above.

Directors:
Desmond Smith, B Surv (Hons 1) U N S W Regd Surv M I S
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The land in the James Creek area is the closest available flood-free land to Yamba. It has been acknowledged that the present land release strategy for Yamba will not be able to be achieved due to various constraints. This proposal would assist overall population demand in a more appropriate situation.

James Creek area has demonstrated that it is suitable as an alternative to the more expensive land in west Yamba. The adjacent 1 (s) zoned land has been taken up and mostly built upon.

The land in this proposal is presently zoned either 1 (a) Rural (Agricultural Protection), 1 (b) Rural (General Rural Land) or 1 (s) Rural (Small Holdings). (See Attachment "A"). The 1 (a) zoned land is flood-free land which is very marginal for agricultural use. Some sugar cane which has been grown on some of the land has been found to be poor and not viable as a sustainable crop. It appears that previous zonings have been done in a generalised manner without regard to individual features or constraints of the land. The non-viability of the land as classic 1 (a) Rural (Agricultural Protection) is believed to be easily demonstrated by soil tests and a proper agricultural assessment by a suitably qualified person. Should council require this assessment the applicants would be willing to engage a suitable person.

A concept plan (Reference 5192/REZ February 2005) has been prepared (copy enclosed as Annexure "B") showing an example of a possible layout of zones for the different land uses. This concept plan is not intended to be definitive but merely a possible layout. Some suggested sites for Public Reserves, community use or more intensive aged development have been suggested but would of course be subject to a more detailed investigation.

A road layout which incorporates the existing road network has also been suggested. Although roundabouts have been proposed in various positions, each intersection would need to be considered as part of a final traffic study. A development control plan featuring a desired road layout may be adopted following rezoning.

The concept plan shows "standard" residential lots of about 800 square metres in size. The estimated lot yield over the subject sites is 1,100 lots as listed below: -

Owner	Estimate of Lot Yield
Mr A Adamson	450
Mr J McPhee / R McIntire	260
Mr D & Mrs G Shedden	140
Mr J Katuzans	20
Mr D Pickering	50
Mr J O'Keeffe	120
Mr P Commerford	40
Mr A Grayson	20
TOTAL	**1100**

The overall lot yield of the James Creek area (including adjacent land) is estimated at 2,100 lots.

There is believed to be no major problems with servicing the site with a reticulated sewer system when required since many types of systems are now available and should be easily adapted to the site.

A desktop study of the feasibility of the provision of a sewer trunk main connecting the proposal area to the existing Maclean sewer system has been undertaken. (See "Sewer Feasibility Study – James Creek Area" – Annexure "E"). This report discusses different options which include: -

1. Possible mains routes
2. Pretreatment and storage pond options
3. Grey water recycling to individual lots; and
4. Various systems within the proposal area.

It is acknowledged that part of any rezoning investigation will involve a study of the suitability of the site plus adjacent sites and how they relate to strategic plans and land settlement strategies within the region as a whole. It is also envisaged that the public and in particular the adjacent land owners and occupants will be encouraged to give their views on any proposed rezoning.

In summary, it is believed that there are many benefits to the public with a proposed rezoning which include: -

1. An improved road and intersection system;
2. A more efficient population yield from a well suited site,
3. Possible provision of both commercial and community sites which will enhance and service the growing population between Maclean and Yamba as an individual entity: and
4. The provision of well-planned aged-care facilities in a pleasant, serviced environment.

Diagrams (Annexures C & D) show a map of flood free land adjacent to Maclean and the present zoning map with the approximate limit of flooding superimposed. These maps illustrate the limited amount of land which is flood free and available for rezoning to cater for future population. Since all land between Yamba and the James Creek area is flood prone and increasing constraints on developing land in the flood prone west Yamba area come to light, enabling available land for rezoning between Maclean and Yamba seems logical and reasonably urgent.

We trust Council will consider our application favourably in order for the proposal to enter an investigation and consultation phase and look forward to your replies at your earliest convenience.

Yours faithfully,
GULAPTIS & SMITH PTY LTD.

Per: Des Smith

ANNEXURE "A"

ZONING MAP

ZONING MAP ANNEXURE "A"

ANNEXURE "B"

CONCEPT URBAN LAYOUT

CONCEPT URBAN LAYOUT

FOR

LOTS 10 & 11 IN DP830112 (O'KEEFFE)
LOT 8 IN DP836244 (PICKERING)
LOT 104 IN DP751388 (McPHEE/McINTIRE)
LOT 1 IN DP1025045 (ADAMSON)
LOT 3 IN DP592726 (GRAYSON)
LOT 3 IN DP611177 (KATUSANS)
LOT 1 IN DP377053 (KATUSANS)
LOT 1077 IN DP1072748 (COMMERFORD)
LOT 2472 IN DP1071253 (COMMERFORD)
& LOT 1033 IN DP830388 (SHEDDON)

CAUTION

1. SKETCH PREPARED FOR DISCUSSION PURPOSES ONLY
2. CONCEPT SHOWN HEREON IS SUBJECT TO REZONING & DEVELOPMENT APPROVAL AND MAY CHANGE.
3. CONTOURS & FEATURES SHOWN DERIVED FROM


LOW DENSITY RESIDENTIAL
LOT 1
P 1025045
6
DP 579094
LOT 92
DP 1002145
LOT 8
DP 836244
PUB. RES.
PUBLIC RESERVE
COMM. OR AGED
COMM. OR AGED
ROAD
ROAD
LOT 1
DP 880125
LOT 10
DP
LOT 11
830112
DP 1026747
LOT 4
1072152
LOT 3
DP
LOT 1077
DP 1072748
100 YEAR FLOOD LEVEL
IN 100 YEAR FLOOD LEVEL
APPROPRIATE
PREPARED BY GILLAPTIS & SMITH P/L

ANNEXURE "C"

LOWER CLARENCE RIVER FLOODPLAIN MANAGEMENT STUDY

ANNEXURE "C"

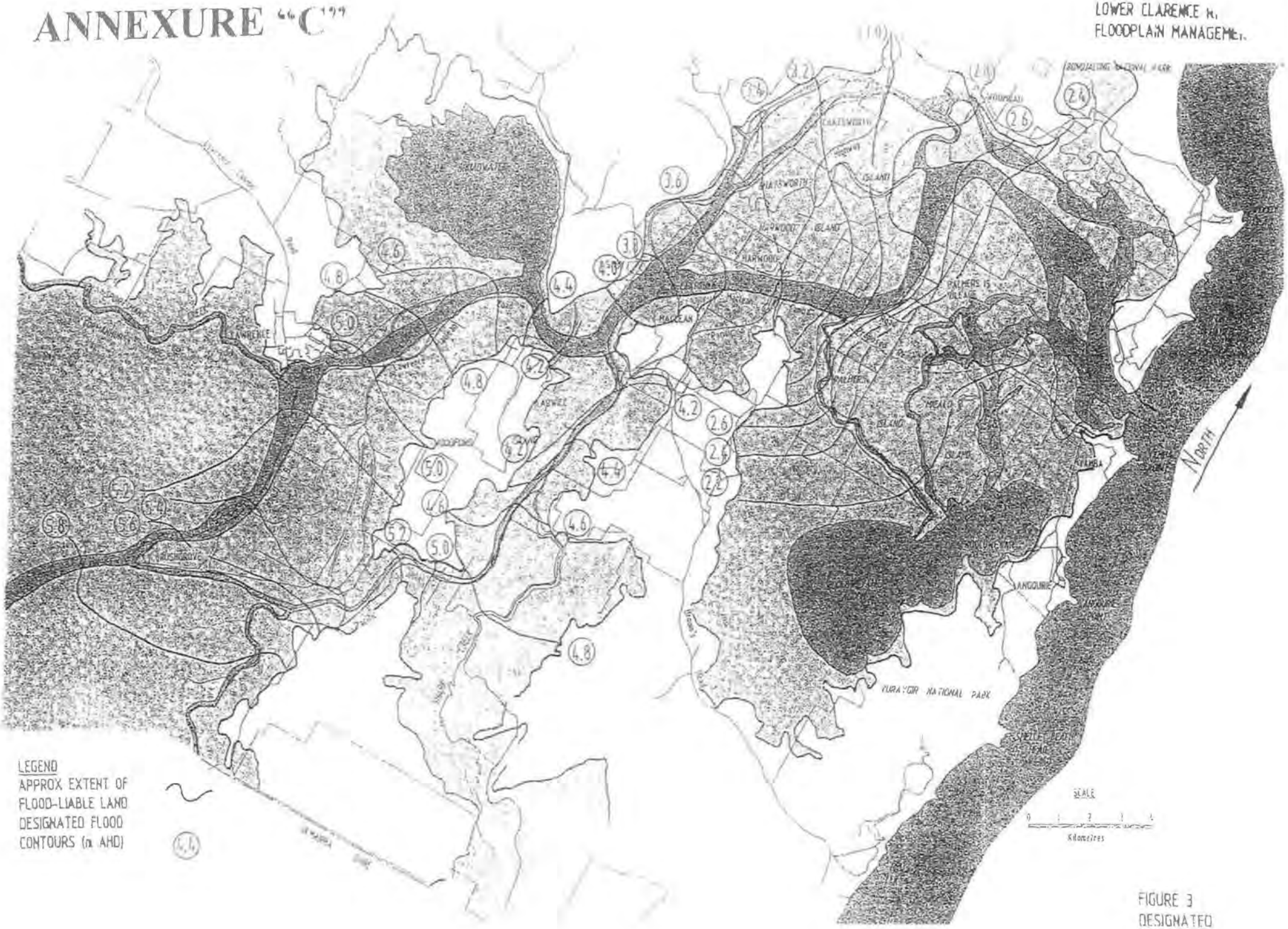


FIGURE 3
DESIGNATED

ANNEXURE "D"

FLOOD LIMIT MAP

ANNEXURE 'B'

SEWER FEASABILITY REPORT FOR

JAMES CREEK AREA

21 February 2005
Ref 05-005

PREPARED BY
McKENZIE BURRIDGE & ASSOCIATES PTY LTD
17/133 PRINCE STREET
PO Box 503, GRAFTON

Phone 02 66 432116

INTRODUCTION

This report has been prepared to examine the feasibility of providing a reticulated sewer system for the James Creek Area, via Maclean. This report has been prepared as part of a rezoning application for the area.

SITE

The site is generally located between James Creek in the west, Palmers Channel in the east, The Clarence River in the north, and Gardiners Road to the south. Much of this area is below the 1:100 year flood level and this area has not been considered in the rezoning or the sewer feasibility report.

The area subject to the rezoning has a potential to produce approximately 2100 lots.

SYSTEM DESCRIPTION

The sewer system will consist of two main sections. The first part will be the localised sewer reticulation collecting sewerage from the individual lots. The second part will be the conveyance of the sewage from the James Creek Area to the sewage treatment facility via a trunk rising main and series of pump stations.

The internal subdivision reticulation would consist of a conventional system of gravity mains serving the individual lot. Pump stations will be provided in the lower areas to minimise the need for deep excavations. This system will be part of the developments works and has not been included in the costing below.

The internal subdivision sewer system will convey the sewage to a common point from where it will be pumped via a truck rising main and series of pump stations to the treatment facility.

Currently the closest treatment works are located at Townsend and Maclean, however it is planned to construct a new treatment works at Woodford Island which will replace all the current treatment works in the area.

FLOWS

The current standard for the design of the sewer systems is "Manual of Practice – Sewer Design" published by the Public Works Department of New South Wales. This manual outlines the design flows as follows:-

Average Dry Weather Flows (ADWF) = 0.011 litre/sec/tenement
For the purpose of this report we have assumed the one lot is an equivalent tenement. Therefore for 2100 lots the ADWF would be 23.1 litres per second

Peak Dry Weather Flow (PDWF) = r x ADWF, where r = 2.09 for 2100 lots.
PDWF = 48.28 litres per second

Peak Wet Weather Flow (PWWF) = PDWF + Storm Allowance (SA), where SA=0.058 litres per second per tenement. PWWF = 170.08 litres per second.

Traditionally the sewer system would be designed for the PWWF and we have based this report on this flow, however it maybe possible to reduce the design flows in a number of ways as follows:-

- The advent of water sensitive urban design aims at reducing the amount of water used and effluent produced. The required use of water reducing fixtures and water efficient cloths and dish washers will reduce the amount of water used and therefore effluent entering the sewer system. The reuse of grey water for flushing of toilets will again significantly reduce effluent. The Design Manual was developed in the 1980's and has not been updated to take into account these developments.

- The use of modern construction materials is likely to reduce the storm allowance. Part of the storm allowance is the result of infiltration of stormwater into the sewer pipes and manholes.

- The peak flows transferred from the development area to the treatment works can be reduced by providing storage for these peaks, such as the storm allowance, until it can be conveyed at a more controlled rate. The use of a detention pond could also be used to provide partial treatment of the sewage prior to it being transferred to the treatment works. This will also aid in the prevention of the sewage going septic during the transport to the treatment works.

1. Introduction

EAL Consulting Services of the Environmental Analysis Laboratory (EAL) has been commissioned by Harrison Shepherd Pty Ltd to undertake a preliminary contaminated land assessment for a proposed rezoning at James Creek Road, James Creek, NSW (Fig. 1; Appendix 1). The total allotment area is approximately 33.57 ha. The area assessed as part of this investigation (i.e. investigation area) is considered to be the entirety of the allotment (i.e. 335,700 m^2) (Fig. 2; Appendix 1).

The objective of this preliminary investigation was 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. As the proposed development is to be residential, the soil analysis results are compared with the NSW DEC (2006) Column 1 of the Table 'Soil Investigation Levels for Urban Redevelopment Sites in NSW'.

This investigation is 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.

2. Scope of Work

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 (1994) Guidelines for Assessing Service Station Sites;
- NSW EPA (1995) Contaminated Sites – Sampling Design Guidelines; and
- NSW EPA (1997) Guidelines for Consultants Reporting Contaminated Sites.

This preliminary assessment report is written in accordance with NSW EPA (1997) Guidelines for Consultants Reporting on Contaminated Sites.

3. Site Identification

The site, James Creek Road, James Creek is formally known as Lot 104 DP 751388. The total allotment is approximately 33.57 ha in size and is rectangular in shape (refer Fig. 2). The centre of the site is located approximately 5.1 km north-east of the main business area of Maclean.

4. Site History

4.1 Zoning

The site is zoned as (RU1) Primary Production Zone or 1(a) Rural (Agricultural Protection in accordance with the Draft Clarence Valley Council Local Environmental Plan (2010) and Maclean LEP (2001) respectively.

4.2 Site Usages

Anecdotal information provided by the original owner of the allotment suggests that the land was not cleared until 1969 when it was cleared in three stages. Clearing was completed by 1973 and by 1975 the entire allotment was planted in sugar cane, this farming was continued until 2005. In the last three years the area has been grassed and grazed by cattle and sheep.

4.3 Site and Aerial Photographs

A detailed review of historical aerial photography was not considered necessary for this investigation. Site photographs are attached in Appendix 2.

4.4 Inventory of Known Chemicals, Wastes and Location

An inventory of chemicals and/or wastes stored at the site was not available. However anecdotal information provided by the previous owner of the site specifies that planted cane was fertilised with Crop King 44, N. P. K. 8.5/9.4/26.5 or an equivalent mix plus Aqua Ammonia at one t/ha 20.5% nitrogen or 1990 Urea at a rate of 450 kg/ha at 46% Nitrogen. Rooted crops were fertilised with Aqua Ammonia or Urea at the same rate. Weed control up until 1990 was by cultivation, after this point cultivation was used only until the crop was half a meter high at which point sprays were used. Weed control sprays used on the allotment included Herbicide Velpar K4 at a rate of 2.5 kg/ha or a mix of 1.5kg/ha of Atrazine, 1.5kg/ha of Diuron and 1.5L/ha of Paraquat.

In the last ten years cane seed sets were dipped in a solution of Shirtan (250 ml in 200L of water). Methoxy Ethyl Mercuric Chloride was used for the control of pineapple disease, the crop was also sprayed with Lorsban (Chlorpyrifos) (500ml/ha) for the control of black beetles.

4.5 Possible Contaminant Sources

Table 1 below 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
Agricultural Activities		
Sugar Cane Cropping and Cattle Grazing	**Fertiliser** (Calcium phosphate, Calcium Sulfate, nitrates, ammonium sulfate, carbonates, potassium, copper, magnesium, molybdenum, boron, cadmium) **Fungicides** (carbamates, copper sulfate, copper chloride, sulfur, chromium, zinc) **Herbicides** (Ammonium Thyocyanate, carbamates, organochlorines, organophosphates, arsenic, mercury, triazines) **Pesticides** (Arsenic, lead, organochlorines, organophosphates, sodium tetraborate, carbamates, sulfur, synthetic pyrethroids) **Solvents** (Xylene, kerosene, methyl isonutyl ketone, amyl acetate, chlorinated solvents)	**Metals** (Silver, Arsenic. Lead, Cadmium, Copper, Nickel, Selenium, Zinc, Mercury, Iron and Aluminium) **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, Methoxyxhlor

4.6 Site Layout Plans

Plates 1 and 2 (Appendix 2) indicate that presently the investigation area is composed of well grassed open paddocks with some scattered trees.

4.7 Historic Use of Adjacent Land

While no historical review of aerial photography was undertaken, it is believed adjacent land uses have been principally agricultural, with a similar history as the subject site being predominantly cane farming.

4.8 Local Usage of Ground/Surface Waters

A search of existing licensed groundwater bores within 250 m of the investigation was conducted using the NSW Natural Resource Atlas (NRATLAS 2009) website. The closest ground water bore (GW301178) is located approximately 870m south of the south-easterly corner of the investigation area. This bore is 42.0m in depth with a standing water level of 7.0m. GW301178 is licensed for domestic use.

4.9 State and Local Authority Records

4.9.1 Contaminated Land Record

A search of the Contaminated Land Record (EPA 2011a) for the, Clarence Valley Council did not identify any site notices relating to the site or adjoining the site.

4.9.2 Protection of the Environment Operations Act Licenses

A search of the current list (EPA, 2011b) 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.

4.9.3 Cattle Tick Dip Sites

A search of the NSW Department of Primary Industry (DPI) Cattle Dip Site Locator tool (http://www.agric.nsw.gov.au/tools/dipsite-locator/) indicated that the closest Cattle Tick Dip Site CARR BROS is approximately 1.05 km north of the north-easterly boundary of the investigation area. This Dip is reported to be currently demolished. Chemicals used at this dip include:

Chemicals used in dip bath	Date first used
ARSENIC	6/38

5. Site Conditions and Surrounding Environment

5.1 Topography

The investigation area rises in the centre of in the investigation area to approximately 20m AHD with minor surface undulations across the site. The allotment slopes at varying rates between approximately 2 - 5%. The site elevation is approximately 10-20m AHD.

5.2 Visible Signs of Contamination

The investigation area was inspected on foot in order to identify any obvious signs of contamination. No indications of obvious contamination were observed during the site inspection. A visual inspection of adjoining land indicated that there were no clearly obvious visible signs of contamination adjoining the site.

5.3 Visible Signs of Plant Stress

There were no visible signs of plant stress observed during the site inspection.

5.4 Presence of Drums, Wastes and Fill Materials

No areas of waste disposal were evident (putrescibles or otherwise) and no indications of imported fill were observed during the site investigation.

5.5 Odours

There were no odours present on the site or when excavating soils during the site investigation.

5.6 Flood Potential

The investigation area is not mapped as a flood planning area and is located outside of the probable maximum flood height as mapped in the Draft Clarence Valley Council Local Environmental Plan (2010).

5.7 Local Sensitive Environments

The investigation area is located approximately 300m east of the border of an allocated SEPP 14 (Coastal Wetlands No. 220a) area (surrounding James Creek). There are no SEPP 26 (Littoral Rainforest) are located in close proximity to the site. The allotment is located approximately 1.7 km south of the Clarence River and approximately 1.3 km west of Palmers Channel.

6. Geology and Hydrogeology

6.1 Soil Stratigraphy

The surface soils of the investigation area are generally grey clayey soils. This soil type is identified as *New Italy* **(ne)** erosional landscape (as described by Morand 1994).

New Italy **(ne)** is described as:

- Moderately deep (100 – 150 cm), poorly/ imperfectly drained Grey Kurosols (Greyed Podzolic Soils) and moderately deep (100 – 150 cm), imperfectly drained Yellow Kurosols (Yellow Podzolic Soils) throughout hillslopes and crests. Shallow (<100 cm), moderately well-drained Orthic Tensols (Siliceous Sands) occur within landscape variant **nea**.

6.2 Location and Extent of Imported and Locally Derived Fill

No imported fill was identified onsite.

6.3 Site Bore Hole Tests

Not applicable to this study as all sampling was taken from surface samples.

6.4 Depth to Groundwater Table

No groundwater investigation is required in this study.

6.5 Summery of Local Meteorology

The average annual rainfall recorded at the Yamba Pilot Station Automated Weather Station is 1456.4 mm, with the highest volume of rainfall falling in January through to June. The driest months are July to December. The average maximum temperature is 23.3°C and the average minimum temperature is 15.5°C.

7. Sampling and Analysis Plan and Sampling Methodology

7.1 Sampling, Analysis and Data Quality Objectives (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 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 site.

7.2 Rationale

Systematic sampling was conducted across the investigation area (refer Fig. 2 for individual sample locations). This investigation area is considered to be 335,700 m^2. Thirty-five (35) individual surface (0 – 200mm) samples were collected using an approximate 85m grid pattern. These samples were homogenised into nine (9) composite samples for analysis. The level of sampling is considered below the minimum sampling density in accordance with NSW EPA (1995) (Table 2). However, given the site history the chosen sampling density is considered appropriate for this preliminary assessment.

All nine composite samples were analysed for a full range of heavy metals (as described in Table 1) and for organochlorine (OC) pesticides (including Aldrin, Cis-chlordane, Trans-chlordane, HCB, DDD, DDE, DDT, Alpha-BHC, Beta-BHC, Delta-BHC, Lindane, Dieldrin, Endrin, Heptachlor, Heptachor epoxide, Alpha-endosulfan, Beta-endosulfan, Endosulfan sulfate, Methoxychlor).

Organophosphate (OP) pesticides (includes Dichlorvos, Phosdrin, Demeton (total), Ethoprop, Monocrotophos, Phorate, Dimethoate, Diazinon, Dapproximatelysulfoton, Methyl parathion, Chloropyrifos, Ronnel, Parathion, Stirofos, Prothiofos, Azinophos methyl, Coumaphos, Fenitrothion, Fenthion, Malathion) 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 not analysed as these organic analytes are typically analysed for service station sites, or at sites with above or under-ground onsite hydrocarbon storage.

Table 2: Minimum sampling points required for site characterisation based on detecting circular hot-spots by using a systematic sampling pattern (NSW EPA, 1995).

Size of Site (hectare) (1 hectare = 10,000m^2)	**Size of Site** (m^2)	**Number of Sampling Points recommended**	**Equivalent Sampling Density** (points per hectare)	Diameter of the **hot spot** that can be detected with 95% confidence (metre)
0.1	1000	6	60.0	15.2
0.2	2000	7	35.0	19.9
0.5	5000	13	26.0	23.1
1	10,000	21	21.0	25.7
1.5	15,000	25	16.7	28.9
2.0	20,000	30	15.0	30.5
3.0	30,000	40	13.3	32.4
4.0	40,000	50	12.5	33.4
5.0	50,000	55	11.0	35.6

7.3 Sampling Methodology

Surface samples (0 – 200mm depth) were collected using a stainless steel spade, with soil being placed in snap lock plastic sample bags. 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 3 for laboratory results with all QA/QC results).

8. 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). 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 3.

Table 3: Soil investigation levels for urban redevelopment sites in NSW: Column 1 'Residential with gardens and accessible soil including children's day care centres, preschools, primary schools, town houses or villas' (NSW DEC 2006).

Contaminant	**Acceptable Limit Column 1 (mg/kg)**	**Modified Acceptable Limit Column 1 (mg/kg) (divided by 4 for composites of 4 samples)**
Arsenic	100	25
Cadmium	20	5
Chromium (VI)	100	25
Copper	1000	250
Lead	300	75
Manganese	1500	375
Nickel	600	150
Zinc	7000	1750
Mercury	15	3.75
OC's (aldrin and dieldrin)	10	2.5
OC's (DDT, DDD, DDE)	200	50

8.1 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' page 40, are presented in Table 4.

Table 4: Background ranges for potential contaminants.

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

9. Results

The results from the soil testing regime are shown below in Table 5, with a copy of the laboratory certificates provided in Appendix 3. The soil sampling numbers correlate with the soil sampling locations as shown in Fig. 2 (Appendix 1).

Table 5: Summary of composite soil analysis results for Lot 104 DP 751388 James Creek Road, James Creek.

Analyte	Composite Sample 1 (SP1-4)	Composite Sample 2 (SP5-8)	Composite Sample 3 (SP9-12)	Composite Sample 4 (SP13-16)	Composite Sample 5 (SP17-20)	Composite Acceptable Limit[1]	Background Range[2]
Metals							
Silver (mg/kg)	0.1	0.1	0.1	0.1	0.1	na	na
Arsenic (mg/kg)	4.1	3.8	4.8	4.0	4.0	<25	0.2 - 30
Lead (mg/kg)	14.1	10.8	13.1	10.4	12.8	<75	<2- 200
Cadmium(mg/kg)	<0.1	0.1	<0.1	<0.1	<0.1	<5	0.04 - 2
Chromium (mg/kg)	5.8	4.4	5.5	6.3	5.8	<25	0.5 - 110
Copper (mg/kg)	3.8	1.9	2.3	3.5	2.2	<250	1 - 190
Manganese (mg/kg)	29.0	20.6	20.0	20.4	33.6	<375	4 - 12,600
Nickel (mg/kg)	1.3	1.0	1.2	1.7	1.5	<150	2 - 400
Selenium (mg/kg)	0.8	0.6	1.0	0.8	0.7	na	na
Zinc (mg/kg)	4.7	2.8	4.8	8.8	6.2	<1750	2 - 180
Mercury (mg/kg)	0.42	0.12	0.14	0.09	0.10	<3.75	0.001 - 0.1
Iron (%)	1.14	1.51	1.77	3.23	1.84	na	na
Aluminium (%)	1.25	0.97	1.10	0.89	1.05	na	na
Pesticides							
Methoxychlor (mg/kg)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<10
Other Organochlorine Pesticides (mg/kg)	<0.05	<0.05	<0.05	<0.05	<0.05	<5.0	<10

Notes

1. Column 1 "Residential with gardens and accessible soil including children's day care centres, preschools, primary schools town houses or villas" (NSW DEC 2006).
2. Environmental Soil Quality Guidelines, Page 40, ANZECC, 1992.

Table 5: Summary of composite soil analysis results for Lot 104 DP 751388 James Creek Road, James Creek.

Analyte	Composite Sample 6 (SP21-24)	Composite Sample 7 (SP25-28)	Composite Sample 8 (SP29-32)	Composite Sample 9 (SP33-36)	Composite Acceptable Limit[1]	Background Range[2]
Metals						
Silver (mg/kg)	<0.1	0.1	<0.1	0.3	na	na
Arsenic (mg/kg)	3.9	3.3	3.2	7.3	<25	0.2 - 30
Lead (mg/kg)	11.3	11.4	10.7	15.9	<75	<2- 200
Cadmium(mg/kg)	<0.1	<0.1	<0.1	0.1	<5	0.04 – 2
Chromium (mg/kg)	4.4	5.1	5.8	8.6	<25	0.5 - 110
Copper (mg/kg)	1.9	2.5	2.9	2.9	<250	1 – 190
Manganese (mg/kg)	17.3	12.0	17.6	34.3	<375	4 – 12,600
Nickel (mg/kg)	1.2	1.0	1.4	1.4	<150	2 – 400
Selenium (mg/kg)	0.7	0.7	0.8	0.9	na	na
Zinc (mg/kg)	3.4	2.5	6.1	12.4	<1750	2 – 180
Mercury (mg/kg)	0.21	0.10	0.18	0.11	<3.75	0.001 – 0.1
Iron (%)	1.75	1.33	1.75	3.89	na	na
Aluminium (%)	0.89	0.90	0.86	1.16	na	na
Pesticides						
Methoxychlor (mg/kg)	<0.2	<0.2	<0.2	<0.2	<0.2	<10
Other Organochlorine Pesticides (mg/kg)	<0.05	<0.05	<0.05	<0.05	<5.0	<10

Notes

1. Column 1 "Residential with gardens and accessible soil including children's day care centres, preschools, primary schools town houses or villas" (NSW DEC 2006).
2. Environmental Soil Quality Guidelines, Page 40, ANZECC, 1992.

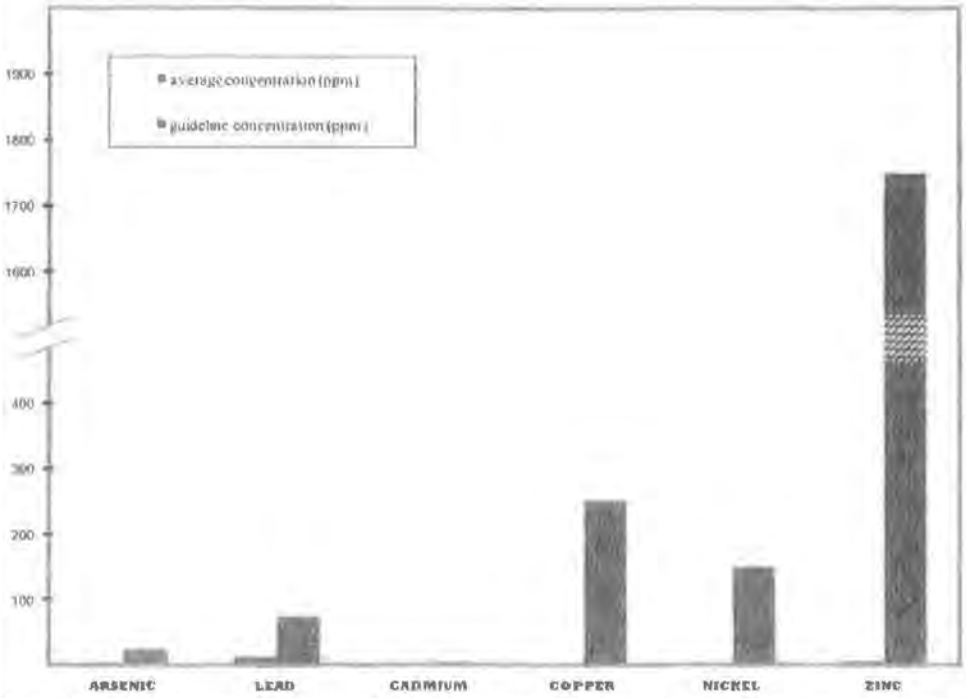
10. Site Characterisation

The potential sources of contamination identified at the subject site are from past agricultural activities historically undertaken.

The results indicate no soil contamination of the site by any of the broad range of metals and pesticides targeted. No pesticides were present above analytical detection limits in the samples analysed. Refer to Table 6 and Graph 1 for summary of all results and direct comparison to guidelines.

Table 6: Ranges for potential contaminants at Lot 104 DP 751388 James Creek Road, James Creek and comparison to relevant guidelines.

Pollutant	**Average concentration (mg/kg)**	**Concentration Range (mg/kg)**	**Composite Acceptable Limit (mg/kg) for Residential with Accessible Gardens**
Arsenic	4.3	3.2 – 7.3	**<25**
Lead	12.3	10.4 – 15.9	**<75**
Cadmium	0.1	0.1 – 0.1	**<5**
Chromium	5.8	4.4 – 8.6	**<25**
Copper	2.7	1.9 – 3.8	**<250**
Manganese	22.8	12.0 – 34.3	**<375**
Nickel	1.3	1.0 – 1.7	**<150**
Zinc	5.7	2.5 – 12.4	**<1750**
Mercury	0.162	0.092 – 0.416	**<3.75**
Organochlorines	..	<0.05-<0.2	**<2.5**



Graph 1: Average concentration of contaminants from individual analysis at Lot 104 DP 751388, James Creek Road, James Creek and comparison to relevant guidelines.

The results of the soil analysis, comparing the laboratory results with the acceptable level for each parameter (Table 5), indicate that the samples analysed do not contain concentrations of the targeted contaminants in excess of the relevant acceptable limits, in accordance with NSW DEC (2006) and NSW EPA (1994).

10.1 Duty to Report

The results of the soil analysis, comparing the laboratory results with the acceptable level for each parameter (Table 5), indicate that the investigated area is not contaminated at levels greater than the acceptable guidelines for the proposed Residential Development. Therefore, it is considered there is no duty to report under the new Duty to Report Guidelines (DECC 2009).

11. Conclusions and Recommendations

The soil-sampling regime was based on a systematic sampling pattern across the investigation area of the allotment requesting a rezoning. The soil analysis confirmed the background site history of no metal or pesticide contamination of the soil within the area investigated.

All sample analysis results had contaminant levels below Column 1 HBIL with all analytes falling within expected background concentrations for this region. Further, no organochlorine pesticides were identified above analytical detection limits in the samples analysed. It is considered a detailed investigation or site remediation is not required. Based on the findings of this preliminary investigation, the site is not considered to represent a significant risk of harm to end users of the proposed rezoning.

References

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Appendices

Appendix 1 - Figures

Figure 1: Locality Plan (Source: Google maps – http://maps.google.com.au/maps).

Figure 2: Location of Sample Points (Source: Google Earth).

Appendix 2 – Site Photographs

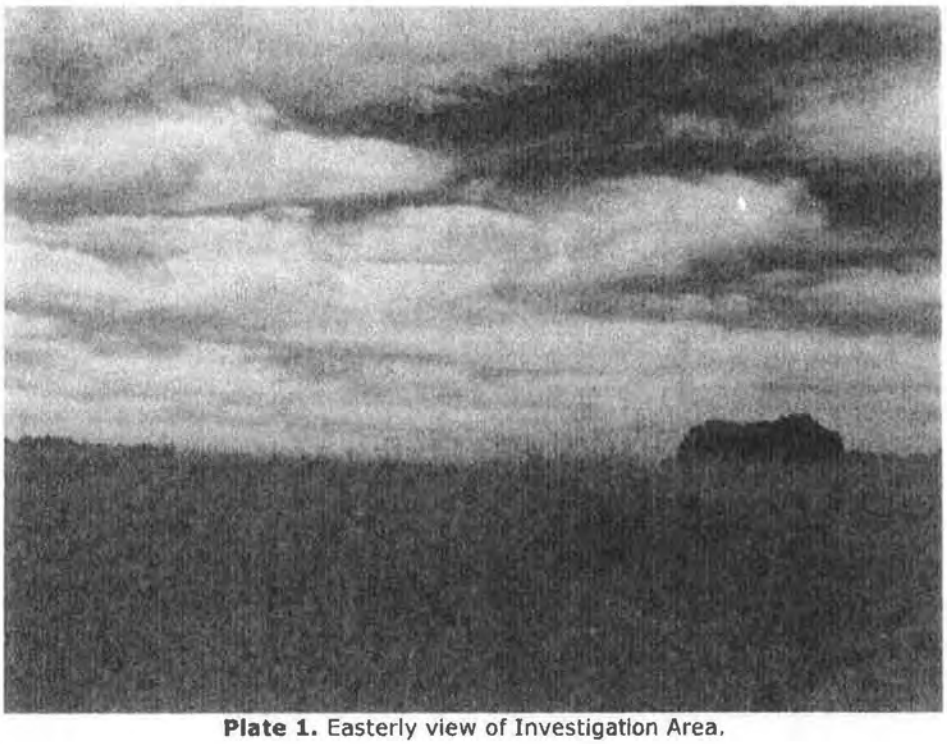

Plate 1. Easterly view of Investigation Area.

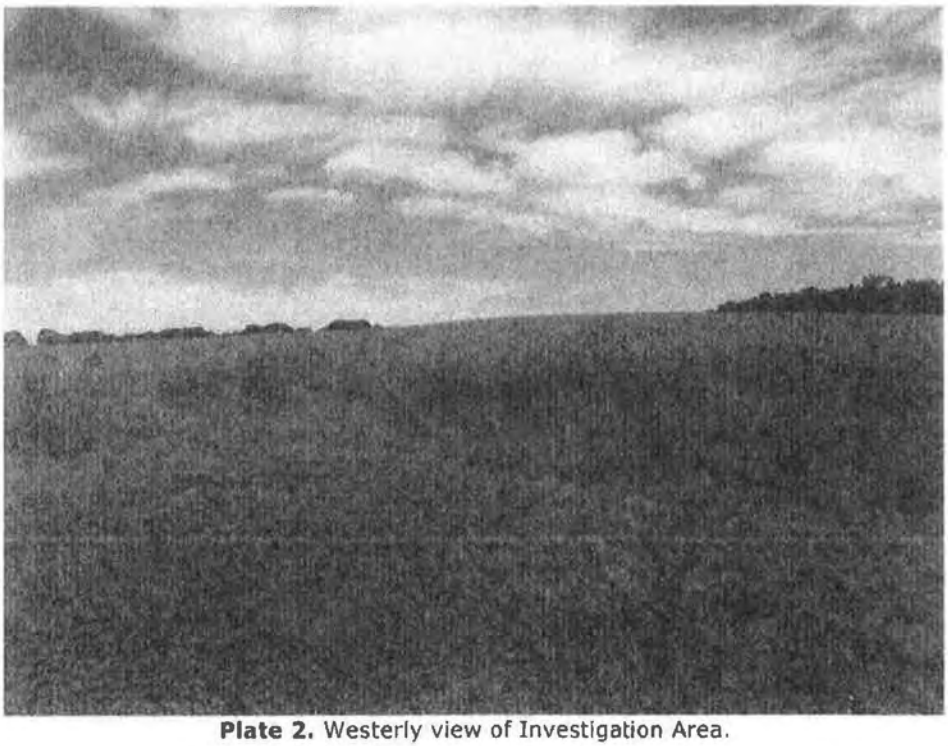

Plate 2. Westerly view of Investigation Area.

Appendix 3 – Laboratory and Subcontracted Results

Laboratory Results

RESULTS OF SOIL ANALYSIS

35 soil samples supplied by EAL Consulting on the 24th March, 2011 - Lab Job No. 83280
Soil samples supplied were composited by EAL into 9 composite samples for analysis
Analysis requested by Nick Davison, Your Job: Q110779, Harrison James Creek Rd, James Creek.
(EAL Consulting, Southern Cross University, Military Rd, East Lismore, NSW, 2480)

ANALYTE	METHOD REFERENCE	Composite Sample 1 Samples (1,2,3,4)	Composite Sample 2 Samples (5,6,7,8)	Composite Sample 3 Samples (9,10,11,12)	Composite Sample 4 Samples (13,14,15,16)	Composite Sample 5 Samples (17,18,19,20)	Composite Sample 6 Samples (21,22,23,24)	Composite Sample 7 Samples (25,26,27,28)	Composite Sample 8 Samples (29,30,31,32)	Composite Sample 9 Samples (33,34,35)
	Job No.	83280/C1	83280/C2	83280/C3	83280/C4	83280/C5	83280/C6	83280/C7	83280/C8	83280/C9
MOISTURE %	c	24	24	25	23	23	25	24	23	26
SILVER (mg/Kg DW)	a	0.1	0.1	0.1	0.1	0.1	<0.1	0.1	<0.1	0.3
ARSENIC (mg/Kg DW)	a	4.1	3.8	4.8	4.0	4.0	3.9	3.3	3.2	7.3
LEAD (mg/Kg DW)	a	14.1	10.8	13.1	10.4	12.8	11.3	11.4	10.7	15.9
CADMIUM (mg/Kg DW)	a	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
CHROMIUM (mg/Kg DW)	a	5.8	4.6	5.5	6.3	5.8	4.4	5.1	5.8	8.5
COPPER (mg/Kg DW)	a	3.8	1.9	2.3	3.5	2.2	1.9	2.5	2.9	2.9
MANGANESE (mg/Kg DW)	a	29.0	20.6	20.0	20.4	33.6	17.3	12.0	17.8	34.3
NICKEL (mg/Kg DW)	a	1.3	1.0	1.2	1.7	1.5	1.2	1.0	1.4	1.4
SELENIUM (mg/Kg DW)	a	0.8	0.6	1.0	0.8	0.7	0.7	0.7	0.8	0.9
ZINC (mg/Kg DW)	a	4.7	2.8	4.8	6.8	6.2	3.4	2.5	6.1	12.4
MERCURY (mg/Kg DW)	a	0.42	0.12	0.14	0.09	0.10	0.21	0.10	0.18	0.11
IRON (% DW)	a	1.14	1.51	1.77	3.23	1.84	1.75	1.33	1.75	3.89
ALUMINIUM (% DW)	a	1.25	0.97	1.10	0.89	1.05	0.89	0.90	0.88	1.16
PESTICIDE ANALYSIS SCREEN										
4,4' - DDD (mg/Kg)	c	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4' - DDE (mg/Kg)	c	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4,4' - DDT (mg/Kg)	c	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methoxychlor (mg/Kg)	c	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Other Organochlorine Pesticides (mg/Kg)	c	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

METHODS REFERENCE
a. ^{1}/$_{3}$Nitric/HCl digest - APHA 3120 ICPMS
b. ^{1}/$_{3}$Nitric/HCl digest - APHA 3120 ICPOES
c. Analysis sub-contracted - results attached

NOTES
DW = Dry Weight

Organochlorine pesticide (OC's) screen: (4,4' DDD, 4,4' DDE, 4,4 DDT, a-BHC, Aldrin, b-BHC, Chlordane, D-bhc, Dieldrin, Endosulfan I, Endosulfan II, Endosulfan sulphate, Endrin, Endrin aldehyde, Endrin ketone, g-BHC (Lindane), Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Methoxychlor, Toxaphene.)

Organophosphorus pesticide (OP's) screen: Bolstar, Chlorpyrifos, Demeton-O, Diazinon, Dichlorvos, Disulfoton, Ethion, Ethoprop, Fenitrothion, Fenthion, Merphos, Methyl azinphos, Methyl parathion, Mevinphos, Naled, Phorate, Ronnel, Tokuthion, Trichloronate.)

ns = no guidelines available.

Subcontracting Results

mgt LabMark ENVIRONMENTAL LABORATORIES

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

Environmental Analysis Laboratory
Southern Cross University Military Rd
East Lismore
NSW 2480

Attention: Environmental Analysis Laboratory

Report	294752-S
Client Reference	B3280
Received Date	Mar 26, 2011

Client Sample ID			B3280/C1	B3280/C2	B3280/C3	B3280/C4
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S11-MA33299	S11-MA33300	S11-MA33301	S11-MA33302
Date Sampled			Mar 24, 2011	Mar 24, 2011	Mar 24, 2011	Mar 24, 2011
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
4,4'-DDD	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
a-BHC	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
a-Chlordane	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Aldrin	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
b-BHC	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
d-BHC	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Dieldrin	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endosulfan I	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endosulfan II	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endrin	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Endrin ketone	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
g-Chlordane	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Heptachlor	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05
Methoxychlor	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
Dibutylchlorendate (surr.)	1	%	83	84	113	76
Tetrachloro-m-xylene (surr.)	1	%	95	95	95	95
% Moisture	0.1	%	24	24	28	23

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Client Sample ID			B3280/C5	B3280/C6	B3280/C7	B3280/C8
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S11-MA33303	S11-MA33304	S11-MA33305	S11-MA33306
Date Sampled			Mar 24, 2011	Mar 24, 2011	Mar 24, 2011	Mar 24, 2011
Test/Reference	LOR	Unit				
Organochlorine Pesticides (OC)						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-Chlordane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-Chlordane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	80	77	81	77
Tetrachloro-m-xylene (surr.)	1	%	84	75	77	80
% Moisture	0.1	%	23	26	24	23

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ENVIRONMENTAL LABORATORIES

Client Sample ID			BS3/SC9
Sample Matrix			Soil
mgt-LabMark Sample No			S11-MA33307
Date Sampled			Mar 24, 2011
Test/Reference	LOR	Unit	
Organochlorine Pesticides (OC)			
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.2	mg/kg	< 0.2
a-BHC	0.05	mg/kg	< 0.05
a-Chlordane	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
g-Chlordane	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2
Dibutylchlorendate (surr.)	1	%	75
Tetrachloro-m-xylene (surr.)	1	%	76
% Moisture	0.1	%	20

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ENVIRONMENTAL LABORATORIES
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NATA # 1261 & 1546
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Phone : +61 2 8913 8888
NATA # 1261 Site # 18217

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1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600

Company Name:	Environmental Analysis Laboratory	**Order No.:**	
Address:	Southern Cross University Military Rd East Lismore NSW 2480	**Report #:** **Phone:** **Fax:**	294752 02 6620 3678
Client Job No.:	B3280		

Received:	Mar 29, 2011 12:00
Due:	Apr 6, 2011 12:12
Priority:	5 Day
Contact name:	Environmental Analysis Laboratory

mgt-LabMark Client Manager: Leanne Knowles

Sample Detail					% Moisture	Organochlorine Pesticides (OC)
Laboratory where analysis is conducted						
Melbourne Laboratory - NATA Site #1261						
Sydney Laboratory - NATA Site #1645					X	X
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	LAB ID		
B3280/C1	Mar 24, 2011		Soil	S11-MA33299	X	X
B3280/C2	Mar 24, 2011		Soil	S11-MA33300	X	X
B3280/C3	Mar 24, 2011		Soil	S11-MA33301	X	X
B3280/C4	Mar 24, 2011		Soil	S11-MA33302	X	X
B3280/C5	Mar 24, 2011		Soil	S11-MA33303	X	X
B3280/C6	Mar 24, 2011		Soil	S11-MA33304	X	X
B3280/C7	Mar 24, 2011		Soil	S11-MA33305	X	X
B3280/C8	Mar 24, 2011		Soil	S11-MA33306	X	X
B3280/C9	Mar 24, 2011		Soil	S11-MA33307	X	X