

RoadNet

Modification of Development Consent

(DA T6-02-109)

for

Goolawah Cooperative

(Rural Land Sharing Community)

Lots 114, 117, 118, 119 & 120 DP754441

Illa-Langhi Road & Nevertire Road,

Crescent Head

for

Goolawah Cooperative

10 January 2014



Document Control Sheet

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1. INTRODUCTION

RoadNet Pty Ltd has been engaged by the Goolawah Cooperative to address the Development Consent (T 6-02-109) requirements issued by Kempsey Shire Council relating to the provision of access roads to the development.

The following extracts of the development consent conditions will be addressed in this report:-

4. *An application for a section 138 of the Roads Act is to be submitted to Council for approval for all works within any Council dedicated road reserve pursuant to Section 138 of the Roads Act 1993. Three copies of engineering construction plans prepared by an appropriately qualified person shall accompany the application for consent for works within the road reserve. Such plans are to be in accordance with Council's Adopted Engineering Standard. The application shall include all necessary works for the following:-*
 - a) *Nevertire Road shall be designed and constructed to a Type 3 Local Road standard having the characteristics listed in Table 1.8 of Development Control Plan No. 3, Specification D1: and*
 - b) *All necessary work to ensure sightlines at the Illa-Langhi Road / Maria River Road intersection comply with AUSTROADS – Rural Road Design.*
12. *Submission of detailed engineering plans providing for the construction of upgraded access of the Illa-Langhi Crown Road reserve from Maria river Road to the subject land, including that part of the road located within the Right of Carriageway over Lot 1 DP 1053841.*
 - a) *The plans are to provide for a Type 3 Local Road in accordance with the Table 1.8 of Development Control Plan No. 3, Specification D1.*
 - b) *The section of access road is to be dedicated to Council at no cost to Council prior to occupation of the premises.*
 - c) *Council's agreement to accept dedication is subject to the owner of the land the subject of this consent entering into a Deed of Agreement with Council to maintain the road. Such agreement to be registered as a caveat on the title of the subject land in a form which binds successive owners to the Agreement.*

1.1 Development Control Plan No. 3, Specification D1.

Council requires that the roads be upgraded to a Type 3 Local Road Standard. The following are the design characteristics for a Type 3 Local Road.

Maximum number of Tenements / Lots	50
Vehicles per Day (vpd)	20 to 200
Carriageway Width	6.0m wide
Shoulder Width	1.0m wide
Wearing Course	14/10mm two coat bitumen seal

Design Speed	80km/h (desirable)
Longitudinal Grading, Minimum	1%
Maximum	16%
Crossfall	3%
Superelevation	As Required
Pavement Design ESA's	1.5 x 10 ⁵

2. DEVELOPMENT PROPOSAL

The development proposed is for 78 approved dwellings to be erected on the site known as a SEPP 15 Development or Cooperative.

2.1 Traffic Generation

In an email reply from Kempsey Shire Council they advised the development would generate approximately 550 trips per day based on a rate of 7 trips per day per dwelling. This is considered to be very high as urban residential developments range between 5 and 9 trips per day where people tend to make more trips travelling to and from work, shops and taking children to sporting events. There is evidence trips in rural areas are somewhat reduced due to the distance required to travel to do these things.

This is also not consistent with Council's Table 1.8 that requires a maximum of 200 trips per day for a maximum of 50 tenements / lots which equates to 4 trips per day per tenement / lot maximum.

The Roads and Maritime Services (RMS) Guide to Traffic Generating Developments does not provide a traffic generation rates for this land use or rural lands / farming.

The Goolawah Cooperative has undertaken traffic counts in August / September of 2013 so to determine a traffic generation rate for the development. **Presently there are 17 households occupying 20 sites. Of these households, 15 have a single car, 4 have two cars and one household has no car.**

The counts were taken over a period of 21 days from August 12 to September 1 2013. Over this period there were a total of 417 movements at 19.86 trips per day or 1.17 trips per day per household. Table 2.1 provides a summary of the daily trips over the survey period.

	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Totals
Week 1: 12 th – 18 th	26	30	20	26	25	14	10	151
Week 2: 19 th – 25 th	26	24	9 *	15	28	10	20	132
Week 3: 26 th – 1 st	28	20	19	21	16	20	10	134
* Day of extreme threat from Fire in Limeburners Creek								417

Table 2.1 – Summary of Daily Trips

It shall be noted on Wednesday 21 August there was an extreme threat of a bushfire in the area so this is why the daily trips were down compared to the rest of the period. A further summary is provided in Table 2.2 for the traffic generation per household.

Cars in Household	Vehicle ID for each Household	No. of Sites each occupy	Total Movements per Household	Average Daily Movement
1	100	1	18	0.86
2	101 + 102	2	43	2.05
2	103 + 104	1	24	1.14
1	105	1	18	0.86
1	106	1	12	0.57
1	107	1	2	0.09
1	108	1	32	1.53
1	109	1	16	0.76
0	110	1	2	0.09
1	111	1	16	0.76
1	112	1	26	1.24
1	200	1	32	1.53
2	201 + 202	1	66	3.14
2	203 + 204	2	50	2.40
1	205	1	10	0.48
1	206	2	38	1.81
1	207	1	12	0.57
20	17	19	417	19.86

Table 2.2 – Average Daily Trips per Household

Further analysis of the count data has provided a peak hour trip generation rate for the development. Table 2.3 provides a summary of this information.

Time of Day	Total Movements (Over 21 Days)	Average Hourly Movements
Pre 07.00	0	0
07.00 – 08.00	28	1.33
08.00 – 09.00	55	2.62
09.00 – 10.00	51	2.43
10.00 – 11.00	27	1.29
11.00 – 12.00	20	0.95
12.00 – 13.00	34	1.62
13.00 – 14.00	27	1.29
14.00 – 15.00	39	1.86
15.00 – 16.00	33	1.57

16.00 – 17.00	44	2.10
17.00 – 18.00	20	0.95
18.00 – 19.00	14	0.67
19.00 – 20.00	2	0.10
20.00 – 21.00	4	0.19
21.00 – 22.00	12	0.57
22.00	7	0.33
22.00+	0	0

Table 2.3 – Hour by Hour Trip Generation

From Table 2.3, the average hourly trip generation rate (10 hour) for the site is 1.70 for the site or 0.10 per household between 7.00am and 5.00pm and 0.83 and 0.05 respectively for the 24 hour period. These rates when compared to the daily trip generation rate of 1.17 are reasonable.

Therefore based on this data the following trip generation rates will used to determine the total trip generation for the development.

Daily Trip Generation Rate	1.20 trips per household / dwelling (93.60 total daily trips), say 94 trips
Peak Hour trip Generation Rate	0.10 trips per household / dwelling (7.80 total peak hour trips), say 8 trips

It should be noted these trip generation rates are significantly lower than the previously advised rates provided by Council, but those rates are more reflective of a suburban residential rate. Due to the relatively remote location of the site short trips will be discouraged, with residents less likely to have a number of short trips to local attractions for convenience shopping such as milk or bread runs.

The general philosophy of the Goolawah Cooperative membership is that it does not exhibit the same behavioural patterns as a suburban household (ie ease of access to facilities). It is the intention of the Cooperative to maintain a higher level of self sufficiency by way of car pooling for shopping and taking children to school. Also, presently a number of residents work from home or are fly in / fly out worker further reducing the need to generate vehicle trips.

2.2 Expected Cooperative Population Growth

As stated previously the Cooperative will provide 78 dwellings on site at full development. The present take up of 20 dwellings has taken 10 years to achieve or an increase of 2 dwellings a year.

Based on this take up rate the Cooperative will not reach full development for another 25 to 30 years. It is noted that in suburban areas the notional take up rate for residential housing is somewhere between 15 to 25 house lots per annum. This take up rate is considered high based on the existing take up rate of the Cooperative considering the rural aspect of the location.

3. PAVEMENT WEARING COURSE CONSIDERATION

Kempsey Shire Council's development consent for the Cooperative required the development to provide a bitumen sealed 6.0m wide dedicated public road. The length of road required to be upgraded is approximately 5kms. Based on a rate of \$5 / m² to seal the roads the cost would be \$150 000 on today's rates. This does not allow for gravel pavement adjustments and associated stormwater drainage that may be required which could double the construction cost of upgrading the roads as required by Council.

Typically Council's make an allowance of 20 years for the design life of a road pavement when considering the infrastructure as an asset. However, due to funding and budget limitations placed on Local Governments the actual life of a pavement can be as much as 30 to 40 years before it is upgraded. This can be evidenced by a presentation made by the Mid Coast Weight of Loads Group (at Kempsey Shire Council) which provided a chart showing at least 50% of Australian Road Pavements are aged over 20 years.

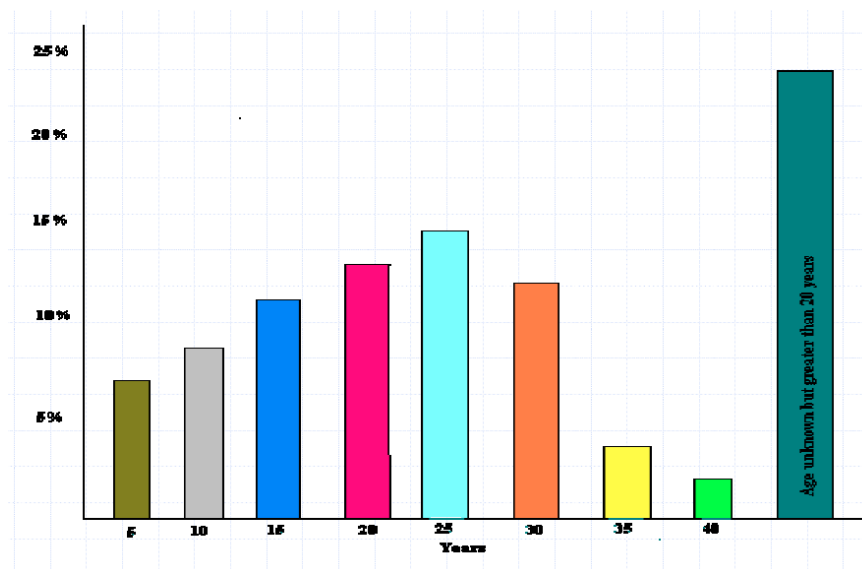


Figure 1 – Age of Australian Road Pavements

(Reference:- www.kempsey.nsw.gov.au/pdfs/documents/docs/MNWOLPresentation.pdf)

This same document also indicates the condition drop (deteriation) in pavement life greatly increases after 10 years (20 year design life).

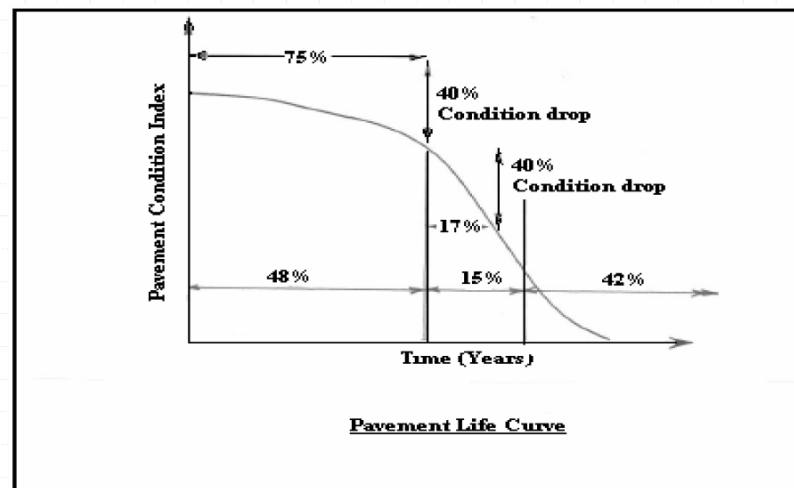


Figure 1 – Pavement Life Curve

4. DEVELOPMENT CONSENT REQUIREMENTS FOR OTHER LIKE DEVELOPMENTS

At a recent meeting held with Kempsey Shire Council senior staff it was discussed if other examples of like developments could be found that addressed similar development consent requirements. The Goolawah Cooperative has investigated this with the following provided.

Communities Not Required to Seal Access Roads

Location	Size of Development	Approved	Comments	Contact
Turntable Falls, Nimbin	Biggest Multiple Occupancy in North Coast 300 shares sold, 220 people live there, 60-80 houses, 2000 acres	Multiple Occupancy approved 1981	<ul style="list-style-type: none"> Multi-entrance as they bought a various farms along Upper Turntable Falls Road. 5km+ Council road, last third of the road unsealed. Have sealed some sections of road over the years voluntarily, Council has contributed. Council maintain the road. 4 other properties and an 8-dwelling Multiple Occupancy use the road. Roads leading from houses to Upper Turntable Falls Rd are still unsealed. 	Mick Parr Carolyn Office Ian Dixon, long-term member if need more info
Wyaliba, Glen Innes	Biggest Multiple Occupancy in the Southern Hemisphere 120 sites	Multiple Occupancy 30 years ago	<ul style="list-style-type: none"> Not required to seal road On Grafton Road, it is many kilometres long and connects the Gydwyir highway at one end. Unsealed roads all around them, not a highly populated area 	Office 67335388 (Wed 12-3 office hours, might be answered outside of this time)
Shepards Ground	29 0 built Expect full occupancy quickly	SEPP 15 In process	<ul style="list-style-type: none"> Advanced Negotiation with Council, Planners support for proposal, to be voted on in the New Year. Council have agreed in principle to an all-weather surface on their 1km long access road, based on Green Traffic Management Plan submitted by Shepard's Ground Engaged dust experts from the mining sector to assess impact. A few neighbours also use road, 3 will be affected by dust. Going to use dust mitigation methods. 	Lucie Bruvel, founder
Dharmananda The Channon, Lismore	Originally 100 allowed, now only want 12-15 dwellings as 80% of 2600 acres for nature 11 occupied	Multiple Occupancy Early 80's	<ul style="list-style-type: none"> No requirement to seal their 5km pre-existing unsealed access road, only property using the access road. 	Carol Perry Ray Flanagan

Location	Size of Development	Approved	Comments	Contact
Lillifield, Kyogle Rd	38 allowed Nearly all full 50-60 people, mostly older, kids gone	Multiple Occupancy 1990	<ul style="list-style-type: none"> Not required to seal, but did so voluntarily in little stretches over the years. 1 official and 1 unofficial access road 	Tina Brigitte Robina
Sidha Farm, Young Road, Lismore	25 sites 20 occupied Occupancy levels always high	Multiple Occupancy 1985	<ul style="list-style-type: none"> One Council Road – Young Road, unsealed 1km road maintained by Council. Only one other property on the road. Joins up with Turntable Creek Road, sealed only in last few years. No road upgrade conditions associated with DA, did pay road contributions. 	Nityama and Satwa
Bindarabbi, Koreelah Tenterfield Shire	21 sites, can ask for more in future based on property size Just got approval Unsure about future occupancy	SEPP 15 2013	<ul style="list-style-type: none"> One council road – White Swamp Road, very long 5km+, joins up with the Gwydir Highway. Council maintains it. Maybe 50 other properties on road, so traffic volumes would be comparable. Busy tourist road, provides access to café and Queen Mary Falls. Flood prone, creek crossing on road. Neighbours wanted it sealed but Council Engineer said it is less expensive to maintain a dirt road and as they are a poor council it was a consideration for them. Council wanted development and did not want to put obstacles in their way, particularly in light of SEPP 15 objectives. Second access road through National Park, negotiating with NP on this. 	Carol Shantal
Bodhi Farm, Wallace Road, The Channon	18 – always high occupancy	Multiple Occupancy 1980's	<ul style="list-style-type: none"> Gravel road, 5kms long. Council grades it once a year. They have voluntarily sealed some internal roads, e.g. steep sections where gravel washed away. Total of 30-40 houses use the road, including another Multiple Occupancy with 10 houses. Movements same as other rural developments, especially with workers and school children. 	John Hutchinson John Seed, our member. Retreat Centre

Location	Size of Development	Approved	Comments	Contact
Patanga, Bellingen Council	16 allowed, 15 built, Took a long time to build up	SEPP15 1988	<ul style="list-style-type: none"> Not required to seal access road. Only property on the road 	Tim Aickin
Shambhala, Bellingen	15 allowed Full occupancy from the start	Multiple Occupancy under old regs Founded 1973	<ul style="list-style-type: none"> They have 1 access road that is all-weather and maintained by Council. Council did not require them to seal it. There are 6 other properties on the road, including another Multiple Occupancy with 3 dwellings. 	Wendy Tanner,

Communities Required to Seal Access Roads and had Development Consent Condition Changed

Location	Size of Development	Approved	Comments	Contact
Black Horse Creek, Kyogle	25 shares, 23 occupied	SEPP 15 1987	<ul style="list-style-type: none"> Won case in Land environment court, represented themselves. Council imposed unreasonable conditions including road conditions. 3.3km access road is mostly all weather with a few bitumen sections past houses. High traffic volumes as many members work. Another subdivision since, with 20+ houses, still all-weather acceptable. 	Diana Woodrow
Bundagen, Coffs Harbour	Approval for 59 expanded houses, 100 houses built (only 1/3 approved) 170 people live there	Multiple Occupancy 1991	<ul style="list-style-type: none"> Overtaken condition to seal 4km access road, with support of State Forestry who owned the road and did not want it sealed. Note Greg Ryan advised that a written request to Bundagen had been made to allow Kempsey Shire Council staff visit Bundgen, which has been discussed and approved at their meeting so long as Greg Ryan is present for the visit. 	Greg Ryan Bob Young Mark Snell

Location	Size of Development	Approved	Comments	Contact
Jindibah, Byron Bay	13 lots	Multiple Occupancy 1996, changed to Community Title in 2007	<ul style="list-style-type: none"> SEPP 15 does not apply in the Byron Shire as they have their own Multiple Occupancy policy, they are a community title with their own lots Were required to bitumen seal access road, but put section 94 contributions put towards it, plus another community which shared the lane chipped in and Council also contributed. They were also able to negotiate to make the road narrower as it got towards the end. 	Christobel Munson
Tapitallee, South Coast	10 lots – 6 cottages with limited occupancy, 2 houses, 1 guest house. 4 lots sold to date	Community and Torrens Title Founded 1982	<ul style="list-style-type: none"> Council wanted them to seal the pre-existing single access road which is 600m long and maintained by Council. It is a low volume road, and they are the only users. Their access road leads to an all-weather road for 50m which is sealed after that. They fought it on environmental grounds, and won with the help of a consultant. They have been allowed to upgrade it to all-weather standard. They did not get everything they wanted, Council had a number of environmental impact concerns hence the limited occupancy conditions. 	Sandi
Honeyeaters, Gloucester	8 house sites – SMALL, fully occupied	SEPP 15 2007	<ul style="list-style-type: none"> Council wanted 2-lane sealed road (1.3km), negotiated with Council and agreed that just seal the first 12m, rest remains gravel. Only 2 other neighbours on the road. 	Martin Ryman Bec

Location	Size of Development	Approved	Comments	Contact
Pinpuna, Near Nimbin, Close to Turntable Falls	12 houses built, only 3 have sought approval	Multiple Occupancy 1982	<ul style="list-style-type: none"> DA approved in 1982, road was a council gravel road. Council imposed crazy road conditions, so no one did anything. Amnesty in 1990's agreed with council that only Section 94 contributions were required, but Council have never levied them. They have sealed some of their internal roads voluntarily, recommended. 	Diana Roberts

Communities Required to Seal Access Roads and Complied

Blue Springs, Blue Knob (Near Nimbin	36 house sites	Multiple Occupancy 20 yrs ago	<ul style="list-style-type: none">• Complied with condition that required them to sealed 1km of access road from main road to their entrance.• Council maintains the road.	Amanda
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Please note contact details for the above contacts can be provided on request.

As can be seen from the investigations completed by the Goolawah Cooperative the requirement to seal access road for these types of developments is not the norm as part of development consent and in other cases the communities have had these requirements overturned.

The investigations also have shown these types of developments are located in isolated locations with minor external use of the roads by other road users.

In the case of the Goolawah development this is consistent where it is located in an isolated location and there will be minimal access required by external traffic. For example Illa-Langhi Road will most likely only be accessed by cooperative residents with a minimal number of construction vehicles and the odd bushfire truck. Whereas Nevertire Road will have some external access by the properties located to the north of the site.

It is also noted that the engineer at Tenterfield Shire Council stated that when neighbours requested the access road leading to the Bindarabbi Cooperative at Koreelah be sealed it would be less expensive to maintain a gravel / all weather road than a bitumen sealed road. In other words they are constrained by lack of funding and budgetary requirements to be able to actively maintain a bitumen sealed road.

Kempsey Shire Council is requesting both Illa-Langhi Road and Nevertire Road be bitumen sealed, but Maria River Road, the road these roads abut presently is not sealed. In a reply to an email received from Council's Development Engineer it was stated Maria River Road currently has 107 vehicles per day travelling on it and is sealed from the intersection of Crescent Road to approximately 3.30km north of the Nevertire Road intersection. As part of this reply it was also advised as developments along Maria River Road were approved section 94 contributions would be used to extend the bitumen seal.

The issue here is the seal needs to be extended 3.30km. It is highly unlikely there will be enough development in the area to generate enough S94 funds in the next 20 or 30 (20 years being the nominal pavement design life) years to achieve this. Then, to complete the project, a further 4.30km between Nevertire Road and Illa-Langhi Road will need to be completed to link the sealed Illa-Langhi Road.

Some of the reasons this is highly unlikely, is that a large amount of the area is flood effected and has restricted access to the south as Maria River Road is unsealed with vehicles reliant on ferries to cross the Hastings River. To the north, presently access is restricted mainly due to the isolation and the 3.30km of unsealed Maria River Road.

5. CONCLUSIONS

Kempsey Shire Council's requirement for this development to provide bitumen sealed access roads is an unwarranted consent condition based on the following:-

- Based on other like developments this consent requirement is rarely required or when it has been arbitration, consultation or change of direction has resulted in this development condition not being required.
- At full development the site will only generate 94 vehicle trips per day. It is proposed there will be 78 dwellings on site. There are presently 20 dwellings.

- The site will not reach full development for another 25 to 30 years (2039 to 2044)
- In terms of asset management for a road pavement the design life is normally considered to be 20 years. At a presentation by the Mid Coast Weight of Loads Group at Kempsey Shire Council the group was advised at least 50% of Australian Road Pavements are aged over 20 years. At the same presentation a slide was also presented showing that after 50% of the design life of a pavement the deterioration of pavements increases markedly.
- The Goolawah Cooperative presently provides more maintenance to the existing all weather roads than Council provided for the unsealed section of Maria River Road in the area.
- The assertion Section 94 contributions will be spent to seal the 3.30km unsealed section of Maria River Road will happen in a timely manner. (ie not long after the Goolawah roads are sealed)

6. RECOMMENDATIONS

The following recommendations are asked to be considered for a modification of the existing development consent conditions for this site.

1. Nevertire Road to remain an all weather (unsealed) public road. The Goolawah Cooperative enters into an agreement with Council by where Goolawah will be responsible for the maintenance of the road so as to satisfy the requirements of emergency services requiring access to the site.
2. Nevertire Road between Maria River Road and the Goolawah Cooperative property boundary is bitumen sealed to Council requirements. The trigger for the completion of the sealing would be when the Goolawah Cooperative reaches 75% of full development (ie 59 dwellings based on Development Applications).

Prior to these works being completed investigation by Kempsey Shire Council will need to be completed as to the current practice of gating of Nevertire Road (public road) at Maria River Road.

3. As an alternative Council give consideration to Goolawah Cooperative making a contribution towards the bitumen sealing of the section of Nevertire Road referred to above.
4. Illa-Langhi Road to remain an all weather (unsealed) Crown Reserve road. The Goolawah Cooperative enters into an agreement with Council by where Goolawah will be responsible for the maintenance of the road so as to satisfy the requirements of emergency services requiring access to the site.