
Land Use Conflict Risk Assessment for Lot 22 DP 1073165 Stuart Street Mullumbimby



Prepared for Byron Shire Council
by MikeSvikisPlanning
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Mike
Svikis
Planning

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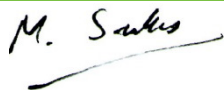
ABN 84638645183

3 Gibingbell Close Ocean Shores 2483

Mob: 0447 805 871

Ph: (02) 6680 1003

E: mikesvikisplanning@bigpond.com

Rev No	Author	Approved for issue	
		Signature	Date
A	Mike Svikis		24 October 2017

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1 Introduction

The aim of this Land Use Conflict Risk Assessment (LUCRA) is to identify and assess the potential for land use conflict issues and risk of occurrence before a proposed change in land use proceeds and disputes arise.

This report documents the nature of the proposed land use change and the nature of the precinct in which the change will occur.

In this case, the proposed change of land use is that part of Lot 22 DP 1073165 is intended to be rezoned from RE1 Public Recreation to R1 General Residential zone under Byron LEP 2104. This will likely result in private dwellings and associated infrastructure being located on part Lot 22.

2 Subject Land

This LUCRA relates to land located at Stuart Street, Mullumbimby, described as Lot 22 in Deposited Plan 1073165 (Figure 1). Lot 22 DP 1073165 is approximately 29.2 hectares in area and is irregular in shape. It is severed by a railway line at its eastern edge, and has Saltwater Creek as a boundary to the north and east. It is bounded to the south and west by farmland used for beef cattle grazing.



Figure 1: Lot 22 DP 1073165

In this case, however, Council does not intend to rezone the entire site. The three areas to remain in the current RE1 zone are the Mullumbimby community gardens, the small freshwater wetland near the railway line, and that part of the lot that is east of the railway line.

This LUCRA will focus on that part of Lot 22 DP 1073165 shown in Figure 2.



Figure 2: Part Lot 22 DP 1073165

3 Methodology

The approach taken in this LUCRA is based on the NSW DPI Land Use Conflict Risk Assessment Guide published in October 2011. The approach is essentially to:

- gather information about the site and locality;
- undertake an inspection;
- talk to key land holders (farmers);
- undertake a land use conflict risk assessment; and
- make some recommendations to reduce the risk or consequence of any conflicts.

Details on how a risk assessment is undertaken are included in the DPI Guide. The tables that describe probability, consequence and risk ranking are included in Appendix A of this report.

3.1 Background Information

Rezoning approximately 22 hectares of the subject land to R1 General Residential will permit a wide range of residential and related uses. With an emphasis on affordable housing, it is likely that this may include master planned communities such as manufactured home estates based on the tiny house concept. The site could house up to 200 dwellings and would need to be serviced by a system of roads and pedestrian/bike paths as well as reticulated water, sewerage and power/communications. It is adjacent to Mullumbimby recreation park, therefore sporting facilities are not anticipated on Lot 22. Neighbourhood open space and landscaping is anticipated based on good urban design principles. Council also supports water sensitive urban design, and a high level of sustainability is expected.

An ecological assessment carried out for the subject land in July 2017, described it as a low-lying area of largely cleared land currently used for cattle grazing and much modified by historical land uses. Vegetation is dominated by exotic pasture species and weeds of pasture. Tree cover includes dense stands of Camphor Laurel along Saltwater Creek and clumps of Camphor Laurel trees at scattered locations. No threatened flora was present during targeted surveys in July 2017. No Endangered Ecological Communities are currently present. The probability of threatened fauna species being dependent upon the site in its current condition is low. Three small wetlands with associated stream channels are located near Saltwater and Kings Creeks. These wetlands are areas with potential for rehabilitation and recovery of the freshwater wetland and floodplain forest habitats.

Lot 22 is mostly flood affected in a 100 year ARI event and totally affected in a PMF event. It is a relatively low velocity area during flood events other than in the small watercourses that occur on the site. It is not a floodway. The land could be developed for residential purposes if it is filled. Three fill scenarios were modelled and design option 3, which has three fill pads and drainage reserves between them, was modelled as having small but acceptable impacts on surrounding rural land. It is the preferred fill option for this site.

The site is mapped on the BSAL maps as significant land, however the Northern Rivers Farmland Mapping Project identifies it as a committed urban area. The land has been grazed under agistment since it was purchased by Council (in 2004) and zoned for Open Space. It is not important farmland. It does not have a history of sugar cane production.

Land surrounding Lot 22 to the east south and west is all used for beef cattle grazing. The land to the south has been used for sugar cane production in the past but this use ceased in 2013. Flooding affects some of the surrounding land as well. The nearest sugar cane production area is 300 metres to the south of Lot 22.



Figure 3: Lot 22 is mostly open cattle grazing land, similar to neighbouring land



Figure 4: Most of the scattered trees on Lot 22 are Camphor Laurel



Figure 5: A small freshwater wetland is located on the eastern edge of Lot 22, near the rail line



Figure 6: The neighbour to the south has a beef cattle operation, and the farm house is located 50 metres from the Lot 22 boundary



Figure 7: The disused rail line is located to the east in a 40 metre wide reserve



Figure 8: The Mullumbimby community gardens are located on the northern boundary of Lot 22

3.2 Site Inspection

The subject land was inspected on 8 September 2017. At this time, it was being used for beef cattle grazing by two adjacent land owners. About 40 young beef cattle were on the site. It had not rained for some time so waterways and wetlands were dry (or nearly dry). The land was fully fenced. The railway line reserve was open to the grazing cattle and, in places, overgrown with weeds and Camphor Laurel. The railway line is disused and has been since 2004.

3.3 Consultation

The two farmer land owners directly affected by the proposed land use change are those immediately to the west (Lot 23 DP 1089627 – Arthur) and to the south (Lot 3 DP 1170435 – Maher).

Mr Arthur was consulted on 19 October 2017, and advised that his property runs only 12 to 15 beef cattle and is only about 9 hectares in size. He used to own Lot 22 and this land has never been used to grow sugar cane. He once grew rye and clover on it for strip grazing. It has been grazing land since he moved there 44 years ago. In the longer term, he sees his land going to a residential zone similar to Lot 22. He agrees that he has the best option to access Jubilee Avenue along his land frontage. In the interim, his concerns as a farmer about encroaching residential development are fences, vandalism, trespass and domestic dogs chasing cattle. He has recently acquired the road reserve between his land and Lot 22 so there is no longer a road reserve to buffer his land to future development.

Mr Maher was consulted on 23 October 2017. He runs approximately 100 breeding cattle on 45 hectares. Mr Maher also agists cattle on Lot 22. He has been on the property for about 25 years and grew sugar cane up until 2013. He has gone back to grazing beef cattle and has no intention of using the land for sugar cane production in the foreseeable future. His private dwelling is located about 50 metres from the boundary of Lot 22 and he values his privacy. His concerns as a farmer about encroaching residential development are noise complaints if he starts machinery early or runs it late, smell if he uses organic fertilisers, rubbish dumping, fences, trespass and domestic dogs chasing cattle. He would appreciate a buffer to his boundary to keep dwellings back from his farm.

4 Land Use Conflict Risk Assessment

4.1 Risk Identification and Risk Controls

The main land use activities that are likely to generate conflict in this situation are residential development and cattle grazing; and residential development and the railway line. The potential for conflict can occur in either direction.

The activities related to cattle grazing that are most likely to create conflict with residential development are outlined in Table 1. Each potential conflict is given a risk ranking based on probability (likelihood) and consequence. The tables that describe probability, consequence and risk ranking are included in Appendix A. Risk rankings greater than 10 are regarded as serious and need to be addressed. Each risk can be reassessed after action is taken to reduce it.

Table 1: Cattle grazing conflicts

Activity	Potential Conflict	Probability Level	Consequence Level	Risk Ranking
Cattle grazing	Noise from cattle and machinery	C	4	8
	Smell from fertiliser or cattle manure	C	4	8
	Flies from cattle dung	C	4	8
	Dust from fields and farm roads	D	5	2
	Sprays from pasture weed control	D	5	2

The activities related to residential development that are most likely to create conflict with cattle grazing are outlined in Table 2:

Table 2: Residential development conflicts

Activity	Potential Conflict	Probability Level	Consequence Level	Risk Ranking
Residential development	Domestic dogs chasing cattle	C	4	8
	Weeds escaping from gardens onto farms	D	4	5
	Fence damage and trespass	C	3	13

The activities related to the railway line that are most likely to create conflict with residential development are outlined in Table 3:

Table 3: Railway line conflicts

Activity	Potential Conflict	Probability Level	Consequence Level	Risk Ranking
Railway line (in use)	Disturbance from train line repairs	D	4	5
	Noise from trains	B	4	12
	Danger to pedestrians on the train line	D	2	14

The activities related to residential development that are most likely to create conflict with the railway line are outlined in Table 4:

Table 4: Residential development conflicts

Activity	Potential Conflict	Probability Level	Consequence Level	Risk Ranking
Residential development	Pedestrians walking the train line disrupting the train	D	4	5
	Domestic animals on the train line disrupting the train	C	4	8

5 Risk Reduction Controls

5.1 Cattle Grazing and Residential Development

The traditional approach to conflict is separation of uses. This can be achieved to some extent by fences, buffer distances and screening. Buffers can be vegetated or open. Reducing conflict can also be assisted by signage, education, information and behavioural change.

The DPI Handbook for Living and Working in Rural Areas suggests a minimum buffer distance of 50 metres between grazing land and urban development. It also recommends 200 metres as a buffer to stockyards or sugar cane, and 300 metres to state and regionally significant farmland.

In this case, the key area of conflict is likely to be trespass and domestic dogs entering grazing land. If the traditional stock fence remains on the property boundary and a 50 metre buffer area is established on Lot 22 then there is an opportunity to vegetate that buffer and potentially erect a dog-proof fence on the urban side to deter pets entering the neighbours' farms. This could also discourage trespass generally.

A 50 metre vegetated buffer would also separate new residents from farming noise and smells, and minimise dumping of garden waste, etc, onto farmland.

New residents of the Lot 22 residential area could be informed by signs that the buffer is needed to protect the farms and trespass is unlawful. Council already has an information package for new residents about living in rural areas, and this could be provided to all future residents.

5.2 Railway Line and Residential Development

Railway lines such as this one are designed to service urban areas and therefore need to enter into those areas. Separation options are often limited. In this case, the rail line is in a 40 metre wide reserve. There is a 15 metre setback from the line to the partly fenced boundary of Lot 22. If trains are reintroduced to this line, they will likely be small commuter-style trains such as the one being established at Byron Bay. If so, the noise should be tolerable and limited in trip regularity and timing (mostly daylight hours). Approaching or leaving Mullumbimby station (600 metres to the north), the speed of any train will be slow. Train line repairs are as required and should only create short-term disruption and noise.

Keeping future residents and domestic pets off the train line is a key goal of any action as the consequences of someone being hit are major. Fencing and signage will be important in this aspect.

SEPP (Infrastructure) suggests that development within 25 metres of a rail corridor must be notified to the relevant rail authority. This is a reasonable guide as to what might be imposed as a buffer to the railway reserve.

Although Lot 22 includes land on both sides of the railway line, there is no formal crossing at this point. If the rail line were re-opened, there is no assumption that the section east of the line would be readily accessible to the public.

There is discussion that the rail line may become a shared bike and pedestrian path, either permanently or as an interim use (rail trail). This would be a positive outcome for this site, giving it easy access to this facility, removing the potential conflict with an active rail line and creating no new conflict potential.

6 Conclusion and Recommendations

Lot 22 has three long boundaries to potential sources of conflict: two are with grazing; and one is a railway line. However, it is of sufficient size that buffers can be incorporated into a future development that will ameliorate the risk of conflict with these neighbouring land uses. A buffer to grazing land of 50 metres and a railway buffer of 25 metres are recommended. Buffers in combination with fencing, signage and education should ensure that risks can be reduced in probability and/or consequence.

Table 5 demonstrates the impact of various management strategies. Risk rankings need to be 10 or less to be acceptable. This can be achieved by implementing the recommended management strategies on this site. The potential conflicts with the highest risk ranking that need to be addressed by management strategies are:

- Fence damage and trespass to grazing land
- Noise from trains
- Danger to pedestrians on the train line

The management strategies are represented visually in the site diagram at Appendix B.

Table 5: Management strategies and impact on risk ranking

Potential Conflict	Management Strategy	Revised Risk Ranking	Performance Target
Noise from cattle and machinery	50 metre vegetated buffer	4	No complaints to farmer or Council
Smell from fertiliser or cattle manure	50 metre vegetated buffer	4	No complaints to farmer or Council
Flies from cattle dung	50 metre vegetated buffer	2	No complaints to farmer or Council
Dust from fields and farm roads	50 metre vegetated buffer	1	No complaints to farmer or Council
Sprays from pasture weed control	50 metre vegetated buffer	1	No complaints to farmer or Council
Domestic dogs chasing cattle	50 metre vegetated buffer with dog fence on urban side	5	Farmer confirms zero dog incidents
Weeds escaping from gardens onto farms	50 metre vegetated buffer	3	Farmer confirms zero weed dumping incidents
Fence damage and trespass	50 metre vegetated buffer with dog fence on urban side; education; signage	5	Farmer confirms zero fence damage or trespass incidents

Potential Conflict	Management Strategy	Revised Risk Ranking	Performance Target
Disturbance from train line repairs	25 metre vegetated buffer	5	No complaints to rail authority or Council
Noise from trains	25 metre vegetated buffer	7	Noise impact no greater than 5 dBA above background
Danger to pedestrians on the train line	25 metre vegetated buffer, fencing and signage	10	No injury or near miss reported to rail authority or Council
Pedestrians walking the train line disrupting the train	25 metre vegetated buffer, fencing and signage	3	No train disruption reported to rail authority
Domestic animals on the train line disrupting the train	25 metre vegetated buffer, fencing and signage	3	No train disruption reported to rail authority

Appendices

Appendix A: Tables describing probability, consequence and risk ranking

Appendix B: Land Use Conflict Reduction Strategies for Lot 22 DP 1073165, Mullumbimby

APPENDIX A

Tables describing probability, consequence and risk ranking

Probability Table – Likelihood of the consequence occurring

Level	Descriptor	Description
A	Almost certain	Common or repeating occurrence
B	Likely	Known to occur, or “it has happened”
C	Possible	Could occur, or “I’ve heard of it happening”
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Measure of consequence

Level: 1	Descriptor: SEVERE
Description	<ul style="list-style-type: none">▪ Severe and or/ permanent damage to the environment▪ Irreversible▪ Severe impact on the community▪ Neighbours are in prolonged dispute and legal action involved
Example/Implication	<ul style="list-style-type: none">▪ Harm or death to animals, fish, birds or plants▪ Long-term damage to soil or water▪ Odours so offensive, some people are evacuated or leave voluntarily▪ Many public complaints and serious damage to Council's reputation▪ Contravenes Protection of the Environment and Operations Act and the conditions of Council's licences and permits. Almost certain prosecution under the POEO Act

Level: 2**Descriptor: MAJOR**

Description

- Serious and/or long-term impact to the environment
- Long-term management implications
- Serious impact on the community
- Neighbours are in serious dispute
-

Example/Implication

- Water, soil or air impacted, possibly in the long term
 - Harm to animals, fish or birds or plants
 - Public complaints. Neighbour disputes occur. Impacts pass quickly
 - Contravenes the conditions of Council's licences and permits, and the POEO Act
 - Likely prosecution
-

Level: 3**Descriptor: MODERATE**

Description

- Moderate and/or medium-term impact to the environment and community
- Some ongoing management implications
- Neighbour disputes occur
-

Example/Implication

- Water, soil or air known to be affected, probably in the short term
 - No serious harm to animals, fish, birds or plants
 - Public largely unaware and few complaints to Council
 - May contravene the conditions of Council's licences and the POEO Act
 - Unlikely to result in prosecution
-

Level: 4**Descriptor: MINOR**

Description

- Minor and/or short-term impact to the environment and community
- Can be effectively managed as part of normal operations
- Infrequent disputes between neighbours

Example/Implication

- Theoretically could affect the environment or people but no impacts noticed
 - No complaints to Council
 - Does not affect the legal compliance status of Council
-

Level: 5**Descriptor: NEGLIGIBLE**

Description

- Very minor impact to the environment and community
- Can be effectively managed as part of normal operations
- Neighbour disputes unlikely

Example/Implication

- No measurable or identifiable impact on the environment
 - No measurable impact on the community or impact is generally acceptable
-

Risk Ranking Matrix

		PROBABILITY				
		A	B	C	D	E
CONSEQUENCE	1	25	24	22	19	15
	2	23	21	18	14	10
	3	20	17	13	9	6
	4	16	12	8	5	3
	5	11	7	4	2	1

Risk Ranking should be below 11

APPENDIX B

Land Use Conflict Reduction Strategies for Lot 22 DP 1073165, Mullumbimby



Land Use Conflict Reduction Strategies for Lot 22 DP 1073165, Mullumbimby



254

Meters

1 : 3,707

(Scale @ A3 Size)

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Notes



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MikeSvikisPlanning

ABN 84638645183

3 Gibingbell Close Ocean Shores 2483

Mob: 0447 805 871

Ph: (02) 6680 1003

E: mikesvikisplanning@bigpond.com