

Federal Village MASTERPLAN

Federal Village Masterplan Movement Study **Full Report**

Prepared by
Federal Village Masterplan Steering Committee
May 2021

In association with
Byron Shire Council



Executive summary

Key issues

- **There are large numbers of people crossing the main street, peaking in the middle of the day and on weekends.** The maximum was recorded on Sunday 21st February 12-2pm, with 890 people crossing in just two hours. The average number of crossings between 12 & 2pm on weekends is 487. These peak times on weekends and in the middle of the day during the week, are largely due to visitors coming to Federal to go to the Doma Cafe, and other commercial venues, although Doma is the star attraction. Other busy times include monthly markets or other special events at Jasper Corner, or in the park.
- **There are large numbers of cars entering, stopping and/or transiting through the village.** The automated traffic counter in the centre of the village showed that the average number of vehicles each day was 1,863, with Vpp85 of 46.1km/hr in the 50km/hr zone. Vpp85 is the standard metric for assessing speed and indicates that 15% of cars were travelling over 46.1km/hr at the counter. There were morning and afternoon peaks during the week, and peaks in the middle of the day on weekends. Based on our own data collection, the number of cars stopping in the main street is highest in the middle of the day on weekends, and in the afternoons on weekdays. Combined with large numbers of people crossing the road, this makes a very dangerous situation, especially as peak times for vehicles often coincide with peak times for pedestrians.
- **During weekdays, it is very busy during school-bus times** with large numbers of adults and children crossing and cars stopping – almost as many as in the middle of the day, with the afternoons slightly busier than the middle of the day. Up to 14 school buses stop in Federal and Federal serves as a bus interchange with many children transitioning between buses and having to cross the road to do so, at a time with extremely busy traffic.
- **Many people make ‘dangerous turns’**, at least in part due to lack of alternative options for turning. ‘Dangerous turns’ were defined as reversing across the road to head in the other direction (most commonly from nose-in parking on the east side of Albert St) or making U-turns in Albert St – and combined with heavy pedestrian and vehicle traffic result in potentially dangerous situations. ‘Dangerous turns’ were fairly constant through the day, but with a slightly higher rate in afternoons, especially on school days.
- **U-turns at Roses Rd or Coachwood Court** are more common on weekday mornings during school term and in the middle of the day on weekends. Again, these can be dangerous at times, and reflect lack of alternatives for turning around.

The combination of large numbers of people crossing and large numbers of cars coming in and out of the village creates very dangerous conditions, with many ‘near miss’ situations documented by our volunteers, especially related to cars reversing out of the ‘nose-in’ parking spots with others also reversing and more traffic on the road. The situation is particularly dangerous for small children.

Introduction

As part of the Federal Village Masterplan Process, the Steering Committee, in consultation with Byron Shire Council, determined that there was a need to collect objective evidence of vehicular and pedestrian movements in the village, to inform improved traffic management and safety.

Byron Shire Council had agreed to organize traffic counters at five locations in and around the village so a decision was made by the Masterplan Steering Committee to undertake manual data collection (counts) of vehicular and pedestrian movements to provide additional depth and understanding to these traffic count data.

How did we collect the information?

- Data were collected by 43 volunteers over a one month period (23rd January to 21st February 2021), on three days per week, and three times per day, at four different 'posts', using standardised forms, with additional data collected on two Sundays.
- These data were supplemented by discussions with school bus drivers to obtain their perspectives; and with data from the traffic counters organised by Byron Shire Council.
- Photographs were also taken.
- Summary data are presented in this report with key issues identified.
- More detail on the process of data collection is provided in Appendix A.

What did we find?

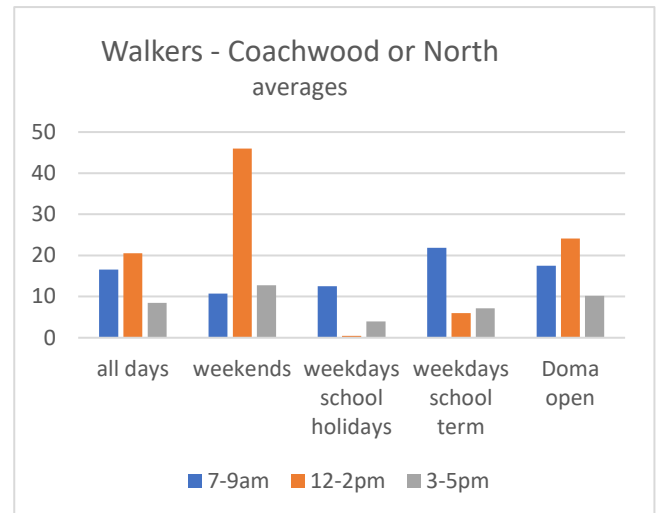
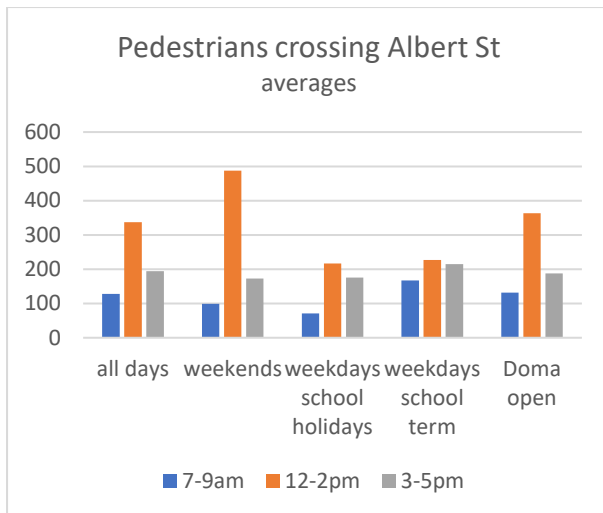
Pedestrian movement and safety concerns

Data were collected on the numbers of people crossing Albert St between the southern end of Albert St and Coachwood Court. As shown in the graph below, there are large numbers of people crossing, with peaks in the middle of the day, and especially on weekends.



The average number of people crossing between 12 & 2pm on weekends is 487, with many family groups with small children or prams. The maximum was recorded on Sunday 21st February 12-2pm, with 890 people crossing. These peak times on weekends and in the middle of the day during the week, are largely due to visitors coming to Federal to go to Doma, and other commercial venues, although Doma is the star attraction. Many people wander slowly down the road and/or do not cross directly,

increasing the time they are on the road and at risk of injury from vehicles. Other busy times include monthly markets or other special events at Jasper Corner, or in the park. During the week, there are more people crossing in the morning during school term than school holidays, consistent with school bus times.



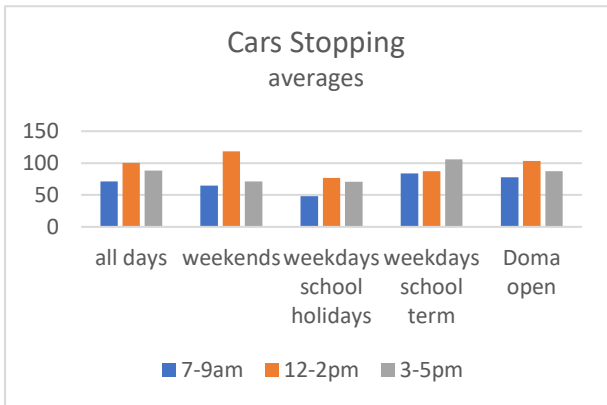
In addition to the people crossing Albert St, there are people walking around the village, and out of the village – up the hill northward towards Goonengerry, around the corner to Coachwood Court or westwards from the village and up Lizray Road. Unfortunately, there were some gaps in this data collection, particularly for Lizray Rd, but available data indicate that walking from Coachwood Court to the village, or out of the village towards Goonengerry is most common during the middle of the day, especially on weekends (average 46 people in two hours). This is also more common in the morning during school term (average 22 people from 7-9am), than during school holidays (average 13 people during the same time period).



Vehicles entering, stopping and transiting through the village

The automated traffic counter in the centre of the village showed that the average number of vehicles each day during the monitored period was 1,863, with Vpp85 of 46.1km/hr in the 50km/hr zone. Vpp85 is the standard metric for assessing speed and indicates that 15% of cars were travelling over 46.1km/hr at the counter. There were morning and afternoon peaks during the week, and peaks in the middle of the day on weekends. The peak hours and number of vehicles counted are shown in the table below, with clear differences between weekdays and weekends. There was some variability in the peak hours, especially on weekends, which were busy fairly continuously from 10 am to 3 pm. Additional data from the other traffic counters is shown in Appendix C.

		Morning peak hours	Afternoon peak hours
Weekdays	Time(s)	8 – 9 am	3 – 4 pm or 4 – 5 pm
	Min, Max number	157, 231	174, 226
Weekends	Time(s)	10 – 11 am or 11 am – 12 pm	12 – 1, 1 – 2, or 2 – 3 pm
	Min, Max number	145, 191	151, 209



From our own data collection, the numbers of vehicles stopping in the village between the southern end of Albert St and Coachwood Court was highest in the middle of the day on weekends, with an average of nearly 120 cars stopping between 12 and 2pm, consistent with peak numbers from the automated traffic counters, and the peak times for pedestrians. These busy weekend times are largely due to the number of visitors coming to eat at Doma.



During the week, it was busier during school term than during school holidays, most markedly during morning and afternoon school bus times.

There are also significant numbers of trucks stopping or passing through the village, more commonly on weekdays than weekends, and often in the mornings during school bus time. On weekdays there was an average of eight trucks between 7 and 9am, seven between 12 and 2pm, and four between 3 and 5pm.



School buses

During weekdays, it is very busy during school-bus times with large numbers of adults and children crossing and cars stopping – almost as many as in the middle of the day, with the afternoons slightly busier than the middle of the day for cars stopping, but the middle slightly busier for pedestrians crossing.



Up to 14 school buses stop in Federal and Federal serves as a bus interchange with many children transitioning between buses and having to cross the road to do so, at a time with extremely busy traffic and large buses, limiting visibility.

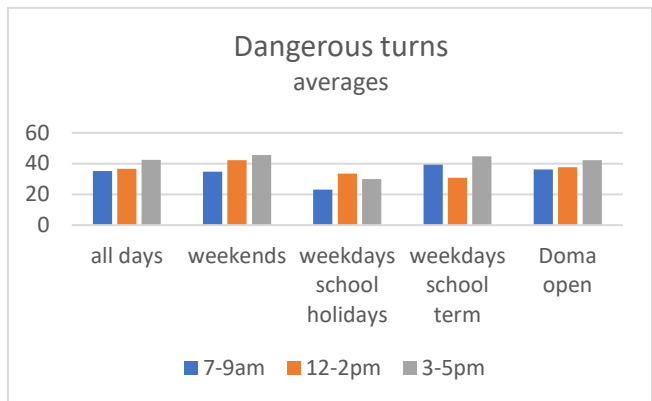
The bus stops are poorly signed, and people frequently park in the bus zone during school bus times. This was a significant concern for the bus drivers, who are sometimes forced to double park to drop or pick up the children. They were concerned about the safety of

children crossing the road, particularly with no clearly marked crossing, and some cars travelling too fast. Other concerns expressed by the bus drivers included the difficulties of doing a U-turn at the T-intersection, and that the unsealed bus stop is slippery and dangerous in wet weather (see Appendix D).

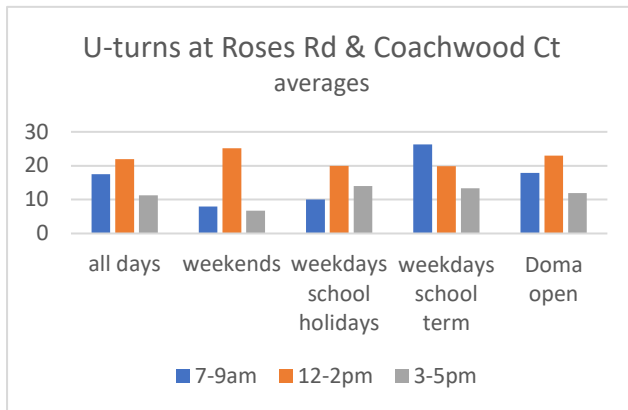


Turning vehicles – ‘Dangerous turns’ and U-turns

‘Dangerous turns’ were defined as reversing across the road to head in the other direction (most commonly from nose-in parking on the east side of Albert St) or making U-turns in Albert St. While these are not necessarily intrinsically dangerous, when combined with heavy pedestrian and vehicle traffic they can result in poor visibility of other vehicles or pedestrians and potentially dangerous situations. Several ‘close call’s or ‘near misses’ were documented by the volunteers. Many people make ‘dangerous



turns', at least in part due to lack of alternative options for turning. 'Dangerous turns' were fairly constant through the day, but with a slightly higher rate in afternoons during school days, and in the middle of the day on weekends.



U-turns at Roses Rd or Coachwood Court are more common on weekday mornings during school term and in the middle of the day on weekends. Again, these can be dangerous at times, and reflect lack of alternatives for turning around.

Additional data from the collection by volunteers is shown in Appendix E.

Conclusions

The combination of large numbers of people crossing and large numbers of cars coming in and out of the village creates a very dangerous situation, with many 'near miss' situations documented by the volunteers, especially related to cars reversing out of the 'nose-in' parking spots with others also reversing and more traffic on the road. The situation is particularly dangerous for small children.

Appendices

A – Data collection process

B – Data collection forms

C – Traffic counter summaries

D – Report on buses and bus movements in Federal village

E – Table summarising volunteer data collection results

Appendix A – Data collection process

An initial meeting was held with 17 local residents (of whom 6 were members of the Federal Masterplan Steering Committee) at the Federal Hall on 17th January 2021, to determine what data to collect (ie what issues they were particularly concerned about with regard to vehicle and pedestrian movements in the village), when to collect it and a process for recruiting volunteers to assist with this work. People were invited to attend this initial meeting by email distributed through Federal Community Centre, Federal School of Arts Association Inc and other local networks and email lists.

Data were collected by 43 volunteers from Saturday 23 January to Sunday 21st February 2021, during three 2-hour intervals (7-9am, 12-2pm and 3-5pm) on Tuesdays, Thursdays and Saturdays during this period. There were four different 'posts' – Village centre pedestrians, Village centre vehicles, Roses Rd and Lizray Rd. If there were insufficient volunteers to cover all posts, the Village Centre and Roses Rd were prioritised. The period of data collection included one week during school holidays, and three weeks during school term.

There was also data collection from 12-2pm on two Sundays – 14th and 21st February for Village Centre, with Roses Rd also covered on the 21st February.

Standardised data collection forms were developed and used for all data collection, with instructions on what to record. Types of data collected at each of the four posts are shown in these forms at Appendix B.

Data were summarised as averages over the period, and averages on weekends, school term weekdays, school holiday weekdays, and days that the Doma Café was open (N.B. Doma was closed on 26th January and 9th February), to provide understanding of factors driving variability. See Appendix E for full data table.

These data were supplemented by discussions with school bus drivers to obtain their perspectives (Appendix D) and some photographs were also taken.

This report summarises data from all these sources – the Council traffic counters (Appendix C), our manual counting, discussions with bus drivers and photographic evidence.

Appendix B – Data collection forms


Federal Movement Study – Data collection form

Village Centre – Pedestrians

Day: _____

Date: ____/____/2021

Instructions:

1. Fill in the day and date above
2. **You are counting people crossing Albert St in either direction, or walking along the road, between the tennis court corner and Coachwood Court; and the number of non-car vehicles (including cyclists and horses)**
3. Put a mark for every count in the count column (), then at the end of your time, write the total in the total column
4. Take a **photo** of Albert street at the **beginning and end** of your shift, from the tennis court end, capturing level of activity
5. Take additional photos of any problematic activity eg pedestrian chaos
6. Add comments as you wish

Number of:	7.00-9.00 am		12.00-2.00 pm		3.00-5.00pm	
	Count	Total	Count	Total	Count	Total
People crossing or walking along the road (in the road itself, between the centre of the road and the parked cars)						
Buses						
Trucks						
Motorbikes						
Cyclists						
Horses						
Comments						

Federal Movement Study – Data collection form

Village Centre – Vehicles

Day: _____

Date: ____/____/2021

Instructions:

1. Fill in the day and date above
2. **You are counting the number of cars stopping in the village between the tennis court corner and Coachwood Court; and also any ‘dangerous’ turns – ie U-turns, or reversing across the middle of the road to turn in opposite direction they’re parked**
3. Put a mark for every count, in the count column (~~||||~~), then at the end of your time, write the total in the total column
4. During your shift, take photos of any poor vehicular behaviour and general chaos
5. Add comments as you wish

Number of:	7.00-9.00 am		12.00-2.00 pm		3.00-5.00pm	
	Count	Total	Count	Total	Count	Total
Cars stopping in the village						
Dangerous turns						
Comments						


Federal Movement Study – Data collection form

Roses Rd corner – based outside the church

Day: _____

Date: ____/____/2021

Instructions:

1. Fill in the day and date above
2. **You are counting the number of cars making U-turns at Roses Rd or at Coachwood Ct (including the hall); parking on Troy’s land or the park, and walkers going up or down the hill.**
3. Put a mark for every count, in the count column (), then at the end of your time, write the total in the total column
4. During your shift, take **photos** of any poor vehicular behaviour and general chaos
5. Add comments as you wish

Number of:	7.00-9.00 am		12.00-2.00 pm		3.00-5.00pm	
	Count	Total	Count	Total	Count	Total
U-turns at Roses Rd						
U-turns at Coachwood Ct/the hall						
Parking on Troy’s land or the park						
Walkers going up or down the hill out of / towards the village						
Comments						

Federal Movement Study – Data collection form

Lizray Rd corner

Day: _____

Date: ____/____/2021

Instructions:

1. Fill in the day and date above
2. **You are counting the number of cars making U-turns at Lizray Rd; walkers going up or down Lizray Rd; and the number of non-car vehicles (including cyclists and horses)**
3. Put a mark for every count, in the count column (**||||**), then at the end of your time, write the total in the total column
4. Add comments as you wish

Number of:	7.00-9.00 am		12.00-2.00 pm		3.00-5.00pm	
	Count	Total	Count	Total	Count	Total
U-turns at Lizray Rd						
Walkers going up or down Lizray Rd						
Buses						
Trucks						
Motorbikes						
Cyclists						
Horses						
Comments						

Appendix C – Traffic counter summary

Counters were in place from 26th January to 26th February 2021, although not all counters were in place for the entire period, or were functioning every day. There were counters placed at six different locations, with one counter moved from 1.1 to 1.2 on 5th February.

Counter number	Location	Average vehicles/day	Vpp85 (km/hr)
1.1	Federal Dr, 100m south of Kings Rd	1269	74.3
1.2	Federal Dr, south of Charltons Rd (50km/hr sign)	1325	70.6
2	Federal Dr, south of Roses Rd (village centre)	1863	46.1
3	Federal Dr, 100m south of Lizray Rd	1089	78.8
4	Binna Burra Rd, 300m north of Waltons Rd	375	83.0
5	Coorabell Rd, east of Echidna Ct	1852	54.5

Appendix D – Report on buses and bus movements in Federal village

There are three bus services that stop in, pass through or transfer passengers in Federal village: - Northern Rivers Buslines, Bulzomi Buslines and Eureka bus service.

Northern Rivers Buslines runs to and from Lismore, Byron Bay and Mullumbimby, and also Goonengerry school.

Eureka bus service carries students from Eureka school.

Bulzomi Buslines carries students from Coorabell and Bangalow schools.

On the afternoon of 25 March 2021 I talked to all the drivers as they pulled in to Federal. They were all happy to talk, especially when I said that we were hoping to improve the situation for them, with the cooperation of Byron Shire Council.

A timeline follows, with comments:

3:15 Bus from Eureka school arrived, turned at Roses Road and parked in the bus zone opposite the shop. From there the bus heads to Mullumbimby via Scarabelotti's.

The driver said that turning at Roses Rd was not a problem but parking in the bus zone was. There was a car parked there at the time. Sometimes there are two Eureka buses and if they arrive at the same time and if there is a car parked in the zone, one of them must park out on the road. I asked why they park on that side of the road with the primary school kids and I was told that it was safer, and the parents all knew where to meet them.

3:25 Bus from Goonengerry school arrived and parked in the bus zone opposite the shop. The bus then heads back to Goonengerry to connect with the Mullum bus then takes a circuitous route back to Federal.

The car was still in the bus zone and an obvious cause of chagrin to the driver. Also, to return to Goonengerry he had to do a kind of 3 point turn at the T intersection which he said was getting difficult because often cars didn't give way.

After he left, I noticed that one of the Goonengerry kids was still waiting for his mum. Fortunately he knew not to cross the road when mum arrived and parked at the shop.

3:45 Small Bulzomi bus from Coorabell came through, stopped briefly in the shop side bus zone then headed for Mullum. Had no chance to talk with the driver.

3:50 Car in bus zone left.

3:55 Another car parked in the park side bus zone (he had options)

4:00 Car left bus zone just before bus from Mullumbimby arrived to drop some kids off and transfer some for the later Lismore bus.

Mainly high school kids but some primary. Apart from the normal worry about cars parked in the bus zone the driver alluded to the problems of mud, where the bus zone is unsealed. He also mentioned some cars driving through at excessive speed and that, although the area is prone to the same risks as a school zone, there is no appropriate speed limitation.

4:10 Return of 3:25 bus from Goonengerry with transfers from other Mullumbimby buses. Park side bus zone. Bus then turns around at T intersection to park in shop side bus zone ready to pick up kids from Lismore bus for Kings Road and Rosebank

4:13 Bus from Byron via Bangalow. Drops kids off ready to pick up Lismore kids for Goonengerry, Mafeking Rd and Repentance Creek.

4:22 Bus from Lismore. Turns at Roses Rd and parks in park side bus zone dropping Lismore kids off and picking up kids from Byron and Mullum for Lismore direction.

Driver highlighted worries about speed of some cars in Federal village.

To distill some ideas from this:

- All drivers concerned about cars in bus zones.
- Turning around at T intersection a problem, but not Roses Rd
- Unsealed bus zone a safety issue esp in wet
- Concern about kids crossing the road vis a vis inadequate speed limits, no pedestrian crossing.
- There is some variation in the arrangements day to day but nothing major. In the mornings all this happens in reverse.

Appendix E – Table summarising volunteer data collection results

Average at specified period/time	7-9am	12-2pm	3-5pm
	People crossing		
All days	128	337	194
Weekends	99	487	173
Weekdays school holidays	71	217	176
Weekdays school term	167	227	214
Doma open	132	364	188
	Cars stopping		
All days	71	100	88
Weekends	65	119	71
Weekdays school holidays	48	77	71
Weekdays school term	84	87	106
Doma open	78	103	87
	Dangerous turns		
All days	35	37	43
Weekends	35	42	46
Weekdays school holidays	23	34	30
Weekdays school term	39	31	45
Doma open	36	38	42
	U-turns at Roses/Coachwood corners		
All days	18	22	11
Weekends	8	25	7
Weekdays school holidays	10	20	14
Weekdays school term	26	20	13
Doma open	18	23	12
	Walkers Coachwood or north up the hill		
All days	17	21	9
Weekends	11	46	13
Weekdays school holidays	13	1	4
Weekdays school term	22	6	7
Doma open	18	24	10
	Buses		
All days	5	0	5
Weekends	0	1	0
Weekdays school holidays	3	1	3
Weekdays school term	9	0	10
Doma open	5	0	5
	Trucks		
All days	6	5	3
Weekends	1	1	1
Weekdays school holidays	2	6	3
Weekdays school term	10	8	4
Doma open	6	6	3