

## MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Russell Street Intersection - Existing Weekday AM Peak]

8:30-9:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	43	10.0	0.028	0.0	LOS A	0.0	0.4	0.07	0.10	0.07	58.8
6	R2	8	10.0	0.028	5.8	LOS A	0.0	0.4	0.07	0.10	0.07	52.6
Approach		52	10.0	0.028	1.0	NA	0.0	0.4	0.07	0.10	0.07	57.7
East: Russell Street												
7	L2	13	10.0	0.006	4.7	LOS A	0.0	0.2	0.10	0.49	0.10	49.2
9	R2	69	10.0	0.049	4.8	LOS A	0.1	0.9	0.12	0.54	0.12	48.7
Approach		82	10.0	0.049	4.8	LOS A	0.1	0.9	0.12	0.54	0.12	48.8
North: High Street												
10	L2	47	10.0	0.044	5.7	LOS A	0.0	0.0	0.00	0.36	0.00	54.9
11	T1	31	10.0	0.044	0.0	LOS A	0.0	0.0	0.00	0.36	0.00	56.8
Approach		78	10.0	0.044	3.4	NA	0.0	0.0	0.00	0.36	0.00	55.7
All Vehicles		212	10.0	0.049	3.4	NA	0.1	0.9	0.06	0.36	0.06	53.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [Barclay Street/ Macquarie Street/ Cambock Lane Intersection - Existing Weekday AM Peak]

8:30-9:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macquarie Street												
1	L2	19	5.0	0.017	4.7	LOS A	0.1	0.5	0.08	0.51	0.08	46.5
2	T1	1	2.0	0.017	4.4	LOS A	0.1	0.5	0.08	0.51	0.08	49.9
3	R2	8	5.0	0.017	4.7	LOS A	0.1	0.5	0.08	0.51	0.08	46.1
Approach		28	4.9	0.017	4.7	LOS A	0.1	0.5	0.08	0.51	0.08	46.5
East: Barclay Street												
4	L2	8	5.0	0.019	4.6	LOS A	0.0	0.1	0.02	0.17	0.02	48.7
5	T1	24	10.0	0.019	0.0	LOS A	0.0	0.1	0.02	0.17	0.02	49.2
6	R2	2	2.0	0.019	5.5	LOS A	0.0	0.1	0.02	0.17	0.02	51.7
Approach		35	8.3	0.019	1.5	NA	0.0	0.1	0.02	0.17	0.02	49.2
North: Cambock Lane East												
7	L2	1	2.0	0.004	5.6	LOS A	0.0	0.1	0.10	0.52	0.10	53.9
8	T1	3	2.0	0.004	4.4	LOS A	0.0	0.1	0.10	0.52	0.10	54.1
9	R2	1	2.0	0.004	5.8	LOS A	0.0	0.1	0.10	0.52	0.10	53.4
Approach		5	2.0	0.004	4.9	LOS A	0.0	0.1	0.10	0.52	0.10	53.9
West: Barclay Street												
10	L2	6	2.0	0.014	5.6	LOS A	0.0	0.1	0.02	0.18	0.02	52.8
11	T1	18	10.0	0.014	0.0	LOS A	0.0	0.1	0.02	0.18	0.02	49.8
12	R2	2	5.0	0.014	4.7	LOS A	0.0	0.1	0.02	0.18	0.02	48.7
Approach		26	7.7	0.014	1.7	NA	0.0	0.1	0.02	0.18	0.02	50.4
All Vehicles		95	6.8	0.019	2.7	NA	0.1	0.5	0.04	0.29	0.04	48.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 102 [Russell Street/ Macquarie Street Intersection - Existing Weekday AM Peak]

8:30-9:30

Site Category: (None)  
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Russell Street												
5	T1	52	10.0	0.041	0.0	LOS A	0.1	1.0	0.08	0.20	0.08	48.6
6	R2	29	5.0	0.041	4.7	LOS A	0.1	1.0	0.08	0.20	0.08	46.0
Approach		81	8.2	0.041	1.7	NA	0.1	1.0	0.08	0.20	0.08	48.0
North: Macquarie Street												
7	L2	12	5.0	0.018	2.4	LOS A	0.1	0.4	0.08	0.47	0.08	46.1
9	R2	18	5.0	0.018	2.3	LOS A	0.1	0.4	0.08	0.47	0.08	45.2
Approach		29	5.0	0.018	2.3	LOS A	0.1	0.4	0.08	0.47	0.08	45.6
West: Russell Street												
10	L2	7	5.0	0.020	4.6	LOS A	0.0	0.0	0.00	0.11	0.00	24.9
11	T1	28	10.0	0.020	0.0	LOS A	0.0	0.0	0.00	0.11	0.00	49.3
Approach		36	9.0	0.020	1.0	NA	0.0	0.0	0.00	0.11	0.00	44.2
All Vehicles		146	7.7	0.041	1.7	NA	0.1	1.0	0.06	0.23	0.06	46.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY****▽ Site: 101 [High Street/ Cambock Lane Intersection - Existing Weekday PM Peak]**

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total Flows veh/h	Flows HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	114	10.0	0.063	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	59.8
6	R2	2	2.0	0.063	6.1	LOS A	0.0	0.1	0.01	0.01	0.01	53.6
Approach		116	9.9	0.063	0.1	NA	0.0	0.1	0.01	0.01	0.01	59.7
East: Cambock Lane												
7	L2	1	2.0	0.001	5.1	LOS A	0.0	0.0	0.30	0.47	0.30	48.9
9	R2	6	2.0	0.005	5.1	LOS A	0.0	0.1	0.23	0.55	0.23	48.7
Approach		7	2.0	0.005	5.1	LOS A	0.0	0.1	0.24	0.54	0.24	48.8
North: High Street												
10	L2	9	2.0	0.122	5.6	LOS A	0.0	0.0	0.00	0.03	0.00	58.0
11	T1	215	10.0	0.122	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	59.7
Approach		224	9.7	0.122	0.2	NA	0.0	0.0	0.00	0.03	0.00	59.7
All Vehicles		347	9.6	0.122	0.3	NA	0.0	0.1	0.01	0.03	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

▽ Site: 101 [High Street/ Barclay Street Intersection - Existing Weekday PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	77	10.0	0.046	0.1	LOS A	0.0	0.3	0.06	0.05	0.06	59.3
6	R2	6	10.0	0.046	6.2	LOS A	0.0	0.3	0.06	0.05	0.06	53.0
Approach		83	10.0	0.046	0.5	NA	0.0	0.3	0.06	0.05	0.06	58.8
East: Barclay Street												
7	L2	7	10.0	0.004	5.0	LOS A	0.0	0.1	0.24	0.48	0.24	48.8
9	R2	35	10.0	0.027	5.1	LOS A	0.1	0.5	0.20	0.56	0.20	48.5
Approach		42	10.0	0.027	5.1	LOS A	0.1	0.5	0.21	0.55	0.21	48.5
North: High Street												
10	L2	75	10.0	0.121	5.7	LOS A	0.0	0.0	0.00	0.20	0.00	56.2
11	T1	143	10.0	0.121	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	58.2
Approach		218	10.0	0.121	2.0	NA	0.0	0.0	0.00	0.20	0.00	57.5
All Vehicles		343	10.0	0.121	2.0	NA	0.1	0.5	0.04	0.21	0.04	56.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Russell Street Intersection - Existing Weekday PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg Satfn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	29	10.0	0.019	0.1	LOS A	0.0	0.3	0.10	0.10	0.10	58.6
6	R2	6	10.0	0.019	6.0	LOS A	0.0	0.3	0.10	0.10	0.10	52.5
Approach		36	10.0	0.019	1.1	NA	0.0	0.3	0.10	0.10	0.10	57.4
East: Russell Street												
7	L2	7	10.0	0.004	4.8	LOS A	0.0	0.1	0.13	0.49	0.13	49.1
9	R2	48	10.0	0.035	4.9	LOS A	0.1	0.6	0.14	0.55	0.14	48.6
Approach		56	10.0	0.035	4.9	LOS A	0.1	0.6	0.14	0.54	0.14	48.7
North: High Street												
10	L2	96	10.0	0.083	5.7	LOS A	0.0	0.0	0.00	0.38	0.00	54.7
11	T1	52	10.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	56.6
Approach		147	10.0	0.083	3.7	NA	0.0	0.0	0.00	0.38	0.00	55.4
All Vehicles		239	10.0	0.083	3.6	NA	0.1	0.6	0.05	0.38	0.05	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

Site: 101 [Barclay Street/ Macquarie Street/ Cambock Lane Intersection - Existing Weekday PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macquarie Street												
1	L2	9	5.0	0.014	4.7	LOS A	0.0	0.3	0.09	0.52	0.09	47.0
2	T1	3	2.0	0.014	4.4	LOS A	0.0	0.3	0.09	0.52	0.09	50.4
3	R2	8	5.0	0.014	4.8	LOS A	0.0	0.3	0.09	0.52	0.09	46.5
Approach		21	4.6	0.014	4.7	LOS A	0.0	0.3	0.09	0.52	0.09	47.2
East: Barclay Street												
4	L2	13	5.0	0.023	4.6	LOS A	0.0	0.1	0.01	0.18	0.01	48.5
5	T1	27	10.0	0.023	0.0	LOS A	0.0	0.1	0.01	0.18	0.01	49.0
6	R2	1	2.0	0.023	5.5	LOS A	0.0	0.1	0.01	0.18	0.01	51.4
Approach		41	8.3	0.023	1.6	NA	0.0	0.1	0.01	0.18	0.01	48.9
North: Cambock Lane East												
7	L2	1	2.0	0.003	5.6	LOS A	0.0	0.1	0.10	0.54	0.10	53.6
8	T1	1	2.0	0.003	4.4	LOS A	0.0	0.1	0.10	0.54	0.10	53.8
9	R2	1	2.0	0.003	5.8	LOS A	0.0	0.1	0.10	0.54	0.10	53.1
Approach		3	2.0	0.003	5.3	LOS A	0.0	0.1	0.10	0.54	0.10	53.5
West: Barclay Street												
10	L2	3	2.0	0.019	5.6	LOS A	0.0	0.3	0.07	0.18	0.07	52.1
11	T1	24	10.0	0.019	0.0	LOS A	0.0	0.3	0.07	0.18	0.07	49.1
12	R2	8	5.0	0.019	4.7	LOS A	0.0	0.3	0.07	0.18	0.07	48.1
Approach		36	8.1	0.019	1.6	NA	0.0	0.3	0.07	0.18	0.07	49.1
All Vehicles		101	7.2	0.023	2.3	NA	0.0	0.3	0.05	0.26	0.05	48.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

▽ Site: 102 [Russell Street/ Macquarie Street Intersection - Existing Weekday PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Russell Street												
5	T1	44	10.0	0.032	0.1	LOS A	0.1	0.6	0.12	0.15	0.12	48.8
6	R2	17	5.0	0.032	4.8	LOS A	0.1	0.6	0.12	0.15	0.12	46.3
Approach		61	8.6	0.032	1.4	NA	0.1	0.6	0.12	0.15	0.12	48.4
North: Macquarie Street												
7	L2	7	5.0	0.020	2.5	LOS A	0.1	0.4	0.15	0.47	0.15	45.9
9	R2	22	5.0	0.020	2.4	LOS A	0.1	0.4	0.15	0.47	0.15	45.1
Approach		29	5.0	0.020	2.4	LOS A	0.1	0.4	0.15	0.47	0.15	45.3
West: Russell Street												
10	L2	4	5.0	0.052	4.6	LOS A	0.0	0.0	0.00	0.02	0.00	25.2
11	T1	92	10.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	49.8
Approach		96	9.8	0.052	0.2	NA	0.0	0.0	0.00	0.02	0.00	48.7
All Vehicles		186	8.6	0.052	0.9	NA	0.1	0.6	0.06	0.14	0.06	48.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

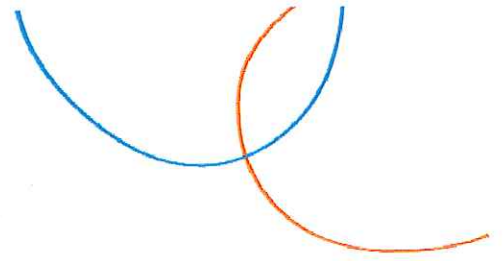
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.





# Appendix C

Existing Conditions SIDRA Results - Sunday

## MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Cambock Lane Intersection - Existing Sunday Midday Peak]

10:30-11:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	319	2.0	0.168	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	59.9
6	R2	3	2.0	0.168	6.7	LOS A	0.0	0.2	0.01	0.01	0.01	53.6
Approach		322	2.0	0.168	0.1	NA	0.0	0.2	0.01	0.01	0.01	59.8
East: Cambock Lane												
7	L2	9	2.0	0.006	5.5	LOS A	0.0	0.2	0.39	0.52	0.39	48.7
9	R2	4	2.0	0.004	5.8	LOS A	0.0	0.1	0.35	0.60	0.35	48.5
Approach		14	2.0	0.006	5.5	LOS A	0.0	0.2	0.38	0.54	0.38	48.6
North: High Street												
10	L2	13	2.0	0.192	5.6	LOS A	0.0	0.0	0.00	0.02	0.00	58.1
11	T1	357	2.0	0.192	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.8
Approach		369	2.0	0.192	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.7
All Vehicles		705	2.0	0.192	0.3	NA	0.0	0.2	0.01	0.02	0.01	59.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Russell Street Intersection - Existing Sunday Midday Peak]

10:30-11:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	46	2.0	0.035	0.4	LOSA	0.1	0.8	0.25	0.16	0.25	57.5
6	R2	18	2.0	0.035	6.4	LOSA	0.1	0.8	0.25	0.16	0.25	51.7
Approach		64	2.0	0.035	2.1	NA	0.1	0.8	0.25	0.16	0.25	55.8
East: Russell Street												
7	L2	6	2.0	0.003	4.7	LOSA	0.0	0.1	0.13	0.49	0.13	49.4
9	R2	207	2.0	0.153	5.0	LOSA	0.4	2.7	0.22	0.58	0.22	48.8
Approach		214	2.0	0.153	5.0	LOSA	0.4	2.7	0.21	0.58	0.21	48.8
North: High Street												
10	L2	289	2.0	0.185	5.6	LOSA	0.0	0.0	0.00	0.49	0.00	54.2
11	T1	53	2.0	0.185	0.0	LOSA	0.0	0.0	0.00	0.49	0.00	55.7
Approach		342	2.0	0.185	4.7	NA	0.0	0.0	0.00	0.49	0.00	54.4
All Vehicles		620	2.0	0.185	4.6	NA	0.4	2.7	0.10	0.49	0.10	52.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [Barclay Street/ Macquarie Street/ Cambock Lane Intersection - Existing Sunday Midday Peak]

10:30-11:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macquarie Street												
1	L2	20	2.0	0.022	4.7	LOS A	0.1	0.6	0.10	0.51	0.10	46.6
2	T1	2	2.0	0.022	4.4	LOS A	0.1	0.6	0.10	0.51	0.10	49.9
3	R2	14	2.0	0.022	4.8	LOS A	0.1	0.6	0.10	0.51	0.10	46.2
Approach		36	2.0	0.022	4.7	LOS A	0.1	0.6	0.10	0.51	0.10	46.6
East: Barclay Street												
4	L2	17	2.0	0.030	4.6	LOS A	0.0	0.1	0.00	0.17	0.00	48.6
5	T1	39	2.0	0.030	0.0	LOS A	0.0	0.1	0.00	0.17	0.00	49.1
6	R2	1	2.0	0.030	5.5	LOS A	0.0	0.1	0.00	0.17	0.00	51.5
Approach		57	2.0	0.030	1.5	NA	0.0	0.1	0.00	0.17	0.00	49.0
North: Cambock Lane East												
7	L2	1	2.0	0.005	5.6	LOS A	0.0	0.1	0.11	0.52	0.11	54.0
8	T1	4	2.0	0.005	4.5	LOS A	0.0	0.1	0.11	0.52	0.11	54.1
9	R2	1	2.0	0.005	5.9	LOS A	0.0	0.1	0.11	0.52	0.11	53.4
Approach		6	2.0	0.005	4.9	LOS A	0.0	0.1	0.11	0.52	0.11	54.0
West: Barclay Street												
10	L2	2	2.0	0.016	5.7	LOS A	0.1	0.4	0.11	0.25	0.11	51.4
11	T1	17	2.0	0.016	0.1	LOS A	0.1	0.4	0.11	0.25	0.11	48.5
12	R2	13	2.0	0.016	4.7	LOS A	0.1	0.4	0.11	0.25	0.11	47.6
Approach		32	2.0	0.016	2.3	NA	0.1	0.4	0.11	0.25	0.11	48.3
All Vehicles		131	2.0	0.030	2.7	NA	0.1	0.6	0.06	0.30	0.06	48.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

**Site: 102 [Russell Street/ Macquarie Street Intersection - Existing Sunday Midday Peak]**

10:30-11:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Russell Street												
5	T1	196	2.0	0.121	0.2	LOSA	0.2	1.6	0.13	0.09	0.13	49.2
6	R2	35	2.0	0.121	5.3	LOSA	0.2	1.6	0.13	0.09	0.13	46.9
Approach		231	2.0	0.121	0.9	NA	0.2	1.6	0.13	0.09	0.13	49.0
North: Macquarie Street												
7	L2	25	2.0	0.016	2.9	LOSA	0.1	0.5	0.31	0.48	0.31	45.4
9	R2	2	2.0	0.016	2.9	LOSA	0.1	0.5	0.31	0.48	0.31	44.6
Approach		27	2.0	0.016	2.9	LOSA	0.1	0.5	0.31	0.48	0.31	45.4
West: Russell Street												
10	L2	25	2.0	0.138	4.6	LOSA	0.0	0.0	0.00	0.05	0.00	25.1
11	T1	239	2.0	0.138	0.0	LOSA	0.0	0.0	0.00	0.05	0.00	49.7
Approach		264	2.0	0.138	0.5	NA	0.0	0.0	0.00	0.05	0.00	47.3
All Vehicles		522	2.0	0.138	0.8	NA	0.2	1.6	0.07	0.09	0.07	48.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

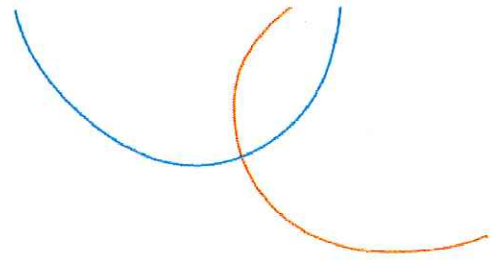
Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



# Appendix D

Post Development SIDRA Results - Weekday

**MOVEMENT SUMMARY**

▽ Site: 101 [High Street/ Barclay Street Intersection - 211 lots AM Peak]

8:30-9:30

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	108	10.0	0.072	0.1	LOSA	0.1	1.1	0.11	0.10	0.11	58.6
6	R2	23	10.0	0.072	6.1	LOSA	0.1	1.1	0.11	0.10	0.11	52.4
Approach		132	10.0	0.072	1.2	NA	0.1	1.1	0.11	0.10	0.11	57.4
East: Barclay Street												
7	L2	21	10.0	0.011	4.8	LOSA	0.1	0.4	0.16	0.49	0.16	49.0
9	R2	188	10.0	0.145	5.1	LOSA	0.4	2.8	0.22	0.58	0.22	48.5
Approach		209	10.0	0.145	5.1	LOSA	0.4	2.8	0.21	0.57	0.21	48.5
North: High Street												
10	L2	95	10.0	0.093	5.7	LOSA	0.0	0.0	0.00	0.34	0.00	55.1
11	T1	71	10.0	0.093	0.0	LOSA	0.0	0.0	0.00	0.34	0.00	57.0
Approach		165	10.0	0.093	3.3	NA	0.0	0.0	0.00	0.34	0.00	55.9
All Vehicles		506	10.0	0.145	3.5	NA	0.4	2.8	0.12	0.37	0.12	52.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

▽ Site: 101 [High Street/ Russell Street Intersection - 211 lots AM Peak]

8:30-9:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	45	10.0	0.029	0.0	LOS A	0.0	0.4	0.07	0.09	0.07	58.9
6	R2	8	10.0	0.029	5.8	LOS A	0.0	0.4	0.07	0.09	0.07	52.7
Approach		54	10.0	0.029	1.0	NA	0.0	0.4	0.07	0.09	0.07	57.8
East: Russell Street												
7	L2	13	10.0	0.006	4.7	LOS A	0.0	0.2	0.11	0.49	0.11	49.2
9	R2	79	10.0	0.056	4.8	LOS A	0.1	1.0	0.13	0.55	0.13	48.7
Approach		92	10.0	0.056	4.8	LOS A	0.1	1.0	0.12	0.54	0.12	48.7
North: High Street												
10	L2	51	10.0	0.049	5.7	LOS A	0.0	0.0	0.00	0.34	0.00	55.1
11	T1	37	10.0	0.049	0.0	LOS A	0.0	0.0	0.00	0.34	0.00	57.0
Approach		87	10.0	0.049	3.3	NA	0.0	0.0	0.00	0.34	0.00	55.9
All Vehicles		233	10.0	0.056	3.4	NA	0.1	1.0	0.06	0.36	0.06	53.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



**MOVEMENT SUMMARY**

▽ Site: 101 [Barclay Street/ Macquarie Street/ Cambock Lane Intersection - 211 lots AM Peak]

8:30-9:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Macquarie Street												
1	L2	19	5.0	0.019	5.0	LOS A	0.1	0.5	0.23	0.52	0.23	46.2
2	T1	1	2.0	0.019	5.0	LOS A	0.1	0.5	0.23	0.52	0.23	49.5
3	R2	8	5.0	0.019	5.1	LOS A	0.1	0.5	0.23	0.52	0.23	45.7
Approach		28	4.9	0.019	5.0	LOS A	0.1	0.5	0.23	0.52	0.23	46.2
East: Barclay Street												
4	L2	8	5.0	0.086	4.6	LOS A	0.0	0.1	0.01	0.04	0.01	49.2
5	T1	147	10.0	0.086	0.0	LOS A	0.0	0.1	0.01	0.04	0.01	49.8
6	R2	2	2.0	0.086	5.7	LOS A	0.0	0.1	0.01	0.04	0.01	52.3
Approach		158	9.6	0.086	0.3	NA	0.0	0.1	0.01	0.04	0.01	49.8
North: Cambock Lane East												
7	L2	1	2.0	0.005	5.7	LOS A	0.0	0.1	0.22	0.53	0.22	53.6
8	T1	3	2.0	0.005	5.0	LOS A	0.0	0.1	0.22	0.53	0.22	53.7
9	R2	1	2.0	0.005	6.6	LOS A	0.0	0.1	0.22	0.53	0.22	53.0
Approach		5	2.0	0.005	5.5	LOS A	0.0	0.1	0.22	0.53	0.22	53.5
West: Barclay Street												
10	L2	6	2.0	0.037	5.7	LOS A	0.0	0.1	0.03	0.07	0.03	52.9
11	T1	59	10.0	0.037	0.0	LOS A	0.0	0.1	0.03	0.07	0.03	49.9
12	R2	2	5.0	0.037	5.0	LOS A	0.0	0.1	0.03	0.07	0.03	48.8
Approach		67	9.1	0.037	0.7	NA	0.0	0.1	0.03	0.07	0.03	50.1
All Vehicles		259	8.8	0.086	1.0	NA	0.1	0.5	0.04	0.11	0.04	49.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

Site: 102 [Russell Street/ Macquarie Street Intersection - 211 lots AM Peak]

8:30-9:30

Site Category: (None)  
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Prop. Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Russell Street												
5	T1	61	10.0	0.047	0.0	LOS A	0.1	1.1	0.08	0.18	0.08	48.8
6	R2	29	5.0	0.047	4.7	LOS A	0.1	1.1	0.08	0.18	0.08	46.2
Approach		91	8.4	0.047	1.6	NA	0.1	1.1	0.08	0.18	0.08	48.2
North: Macquarie Street												
7	L2	12	5.0	0.018	2.4	LOS A	0.1	0.4	0.09	0.47	0.09	46.0
9	R2	18	5.0	0.018	2.3	LOS A	0.1	0.4	0.09	0.47	0.09	45.2
Approach		29	5.0	0.018	2.4	LOS A	0.1	0.4	0.09	0.47	0.09	45.5
West: Russell Street												
10	L2	7	5.0	0.021	4.6	LOS A	0.0	0.0	0.00	0.10	0.00	25.0
11	T1	32	10.0	0.021	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	49.4
Approach		39	9.1	0.021	0.9	NA	0.0	0.0	0.00	0.10	0.00	44.7
All Vehicles		159	7.9	0.047	1.5	NA	0.1	1.1	0.06	0.21	0.06	46.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

▽ Site: 101 [High Street/ Barclay Street Intersection - 211 lots PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	81	10.0	0.051	0.2	LOS A	0.1	0.6	0.11	0.07	0.11	58.9
6	R2	11	10.0	0.051	6.5	LOS A	0.1	0.6	0.11	0.07	0.11	52.7
Approach		92	10.0	0.051	0.9	NA	0.1	0.6	0.11	0.07	0.11	58.1
East: Barclay Street												
7	L2	11	10.0	0.006	5.0	LOS A	0.0	0.2	0.25	0.48	0.25	48.8
9	R2	92	10.0	0.074	5.3	LOS A	0.2	1.3	0.24	0.59	0.24	48.4
Approach		102	10.0	0.074	5.2	LOS A	0.2	1.3	0.24	0.58	0.24	48.4
North: High Street												
10	L2	160	10.0	0.175	5.7	LOS A	0.0	0.0	0.00	0.30	0.00	55.3
11	T1	151	10.0	0.175	0.0	LOS A	0.0	0.0	0.00	0.30	0.00	57.3
Approach		311	10.0	0.175	2.9	NA	0.0	0.0	0.00	0.30	0.00	56.3
All Vehicles		504	10.0	0.175	3.0	NA	0.2	1.3	0.07	0.32	0.07	54.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [High Street/ Russell Street Intersection - 211 lots PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: High Street												
5	T1	34	10.0	0.022	0.1	LOS A	0.0	0.3	0.10	0.09	0.10	58.7
6	R2	6	10.0	0.022	6.0	LOS A	0.0	0.3	0.10	0.09	0.10	52.6
Approach		40	10.0	0.022	1.0	NA	0.0	0.3	0.10	0.09	0.10	57.7
East: Russell Street												
7	L2	7	10.0	0.004	4.8	LOS A	0.0	0.1	0.14	0.48	0.14	49.1
9	R2	53	10.0	0.038	4.9	LOS A	0.1	0.7	0.14	0.55	0.14	48.6
Approach		60	10.0	0.038	4.9	LOS A	0.1	0.7	0.14	0.54	0.14	48.7
North: High Street												
10	L2	103	10.0	0.089	5.7	LOS A	0.0	0.0	0.00	0.38	0.00	54.7
11	T1	55	10.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	56.6
Approach		158	10.0	0.089	3.7	NA	0.0	0.0	0.00	0.38	0.00	55.4
All Vehicles		258	10.0	0.089	3.6	NA	0.1	0.7	0.05	0.37	0.05	54.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## MOVEMENT SUMMARY

▽ Site: 101 [Barclay Street/ Macquarie Street/ Cambock Lane Intersection - 211 lots PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver No. Cycles	Average Speed km/h	
South: Macquarie Street													
1	L2	9	5.0	0.015	4.8	LOS A	0.1	0.4	0.18	0.52	0.18	46.7	
2	T1	3	2.0	0.015	5.0	LOS A	0.1	0.4	0.18	0.52	0.18	50.1	
3	R2	8	5.0	0.015	5.1	LOS A	0.1	0.4	0.18	0.52	0.18	46.3	
Approach		21	4.6	0.015	5.0	LOS A	0.1	0.4	0.18	0.52	0.18	47.0	
East: Barclay Street													
4	L2	13	5.0	0.055	4.6	LOS A	0.0	0.1	0.01	0.07	0.01	49.0	
5	T1	87	10.0	0.055	0.0	LOS A	0.0	0.1	0.01	0.07	0.01	49.6	
6	R2	1	2.0	0.055	5.8	LOS A	0.0	0.1	0.01	0.07	0.01	52.1	
Approach		101	9.3	0.055	0.6	NA	0.0	0.1	0.01	0.07	0.01	49.5	
North: Cambock Lane East													
7	L2	1	2.0	0.003	5.9	LOS A	0.0	0.1	0.25	0.53	0.25	53.2	
8	T1	1	2.0	0.003	5.0	LOS A	0.0	0.1	0.25	0.53	0.25	53.3	
9	R2	1	2.0	0.003	6.5	LOS A	0.0	0.1	0.25	0.53	0.25	52.6	
Approach		3	2.0	0.003	5.8	LOS A	0.0	0.1	0.25	0.53	0.25	53.0	
West: Barclay Street													
10	L2	3	2.0	0.068	5.8	LOS A	0.1	0.4	0.04	0.05	0.04	52.7	
11	T1	114	10.0	0.068	0.0	LOS A	0.1	0.4	0.04	0.05	0.04	49.7	
12	R2	8	5.0	0.068	4.9	LOS A	0.1	0.4	0.04	0.05	0.04	48.6	
Approach		125	9.5	0.068	0.5	NA	0.1	0.4	0.04	0.05	0.04	49.7	
All Vehicles		251	8.9	0.068	1.0	NA	0.1	0.4	0.04	0.11	0.04	49.4	

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**MOVEMENT SUMMARY**

▽ Site: 102 [Russell Street/ Macquarie Street Intersection - 211 lots PM Peak]

16:45-17:45

Site Category: (None)

Giveaway / Yield (Two-Way)

**Movement Performance - Vehicles**

Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Prop. of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Russell Street												
5	T1	49	10.0	0.035	0.1	LOS A	0.1	0.7	0.11	0.14	0.11	48.9
6	R2	17	5.0	0.035	4.9	LOS A	0.1	0.7	0.11	0.14	0.11	46.4
Approach		66	8.7	0.035	1.3	NA	0.1	0.7	0.11	0.14	0.11	48.5
North: Macquarie Street												
7	L2	7	5.0	0.020	2.6	LOS A	0.1	0.4	0.16	0.48	0.16	45.9
9	R2	22	5.0	0.020	2.4	LOS A	0.1	0.4	0.16	0.48	0.16	45.1
Approach		29	5.0	0.020	2.4	LOS A	0.1	0.4	0.16	0.48	0.16	45.3
West: Russell Street												
10	L2	4	5.0	0.056	4.6	LOS A	0.0	0.0	0.00	0.02	0.00	25.2
11	T1	99	10.0	0.056	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	49.9
Approach		103	9.8	0.056	0.2	NA	0.0	0.0	0.00	0.02	0.00	48.8
All Vehicles		199	8.7	0.056	0.9	NA	0.1	0.7	0.06	0.13	0.06	48.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

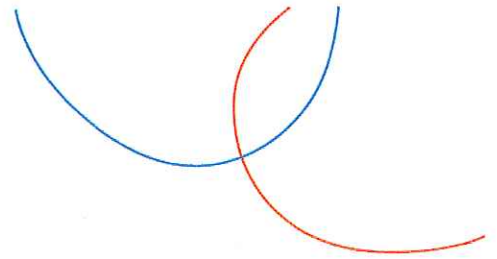
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**pitt&sherry**



Ridgeside Lane, Evandale – Traffic Impact Assessment

**Pitt & Sherry  
(Operations) Pty Ltd**  
ABN 67 140 184 309

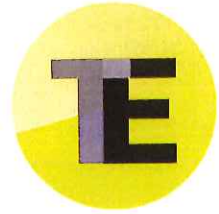
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Sydney  
Brisbane  
Hobart  
Launceston  
Newcastle  
Devonport  
Wagga Wagga





## Technical Memo

9 May 2019

Traders in Purple  
PO Box 1984  
Macquarie Centre  
NSW 2113

5259\_AC\_R  
AJM

Attn: Mr. Brett Robinson

Dear Sir,

RE: Ridgeside Lane subdivision and development aircraft noise intrusion assessment.

Please find below a report on aircraft noise intrusion in relation to a proposed subdivision and development at Ridgeside Lane, Evandale.

### 1. INTRODUCTION

Tarkarri Engineering was commissioned by Traders in Purple to conduct an aircraft noise intrusion impact assessment of a proposed subdivision and development at Ridgeside Lane, Evandale, Tasmania.

The assessment is a requirement under the Northern Midlands Council Interim Planning Scheme 2013 due to the proximity of the land to the Launceston Airport. The relevant code and use standard under the scheme are provided below for reference.

#### **E12 Airports Impact Management Code**

##### **E12.5 Use Standards**

##### **E12.5.1 Noise Impacts**

###### Objective

To ensure that noise impacts on use within the ANEF\* contours from aircraft and airports are appropriately managed.

###### Objective

To ensure that noise impacts on use within the ANEF contours from aircraft and airports are appropriately managed.







Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	P1 All new buildings must comply with the <i>Australian Standard 2021-2000 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction</i> .
A2 Sensitive use (whether ancillary to other use or development or not) must not occur within the 25 ANEF contour	P2 No performance criteria.

\* Australian Noise Exposure Forecasting.

In conducting this assessment guidance is also taken from the National Airports Safeguarding Advisory Group (NASAG) which comprises Commonwealth, State and Territory Government planning and transport officials, the Australian Government Department of Defence, the Civil Aviation Safety Authority (CASA), Airservices Australia and the Australian Local Government Association (ALGA). This group has developed the National Airports Safeguarding Framework. Under this framework NASAG provides additional guidelines to assist land use planners and developers in assessing whether aircraft noise is likely to be intrusive within a community. With changes to the noise emission output of modern aircraft and the increased frequency of flights at airports NASAG recognise that the original study which formed the basis for the ANEF contour system is no longer definitive. Experience has shown that most noise complaints originate outside the 20 ANEF contour (considered acceptable for all forms of land use development, see section 3.1 for further detail) which does not reflect the *AS2021's* prediction of perceived intrusiveness.<sup>[1]</sup>

## 2. SITE DESCRIPTION

The proposed development is situated to the east of the township of Evandale and encompasses the following land titles:-

- 221 Logan Rd, Evandale (Title: 106773/1).
- 98 Ridgeside Lane, Evandale (Title: 145763/2).
- Logan Rd, Evadale (Title: 101154/1).

The Launceston Airport is located to the NW with the closest runway (Runway 32) approximately 4.1 km from the subdivision and development boundary.

Figure 2-1 provides an aerial view with the location of the proposed Ridgeside Lane subdivision and development, Launceston Airport and Evandale Township marked. Figure 2-2 provides a concept master plan of the subdivision and development (provided by Trades in Purple).

Figures 2-3 and 2-4 provide current flight paths for the airport (from the airport masterplan<sup>[2]</sup>) with the approx. location of the subdivision and development marked.

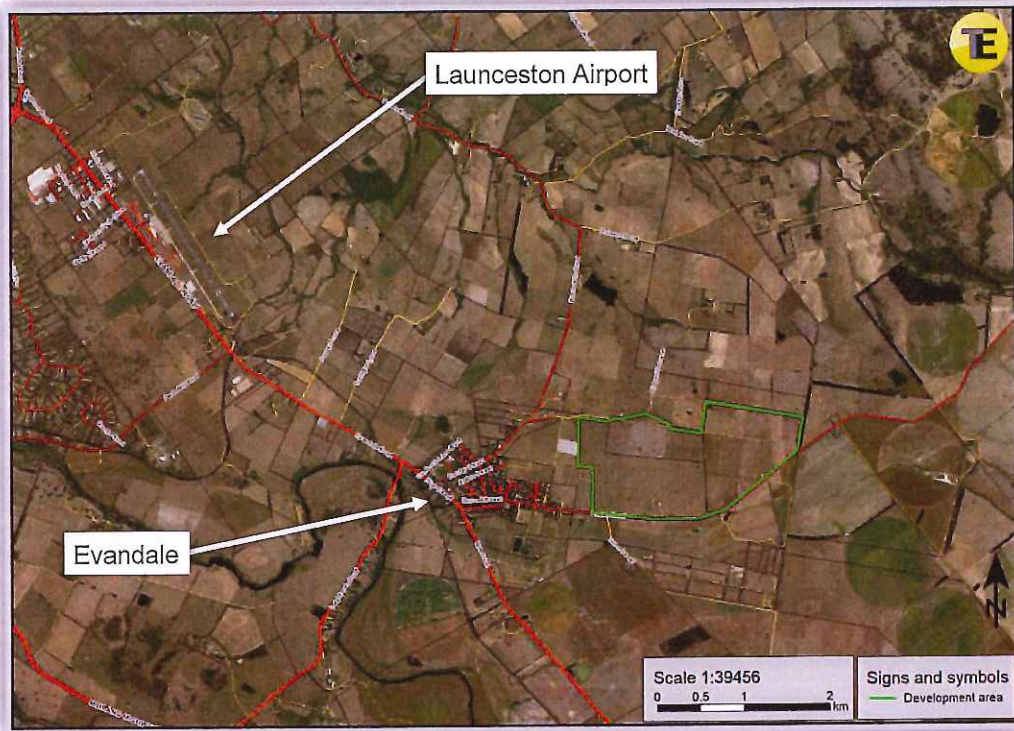


Figure 2-1: Aerial view of subdivision and development area and surrounds.



Figure 2-2: Concept Master Plan of proposed Ridgeside Lane subdivision and development.

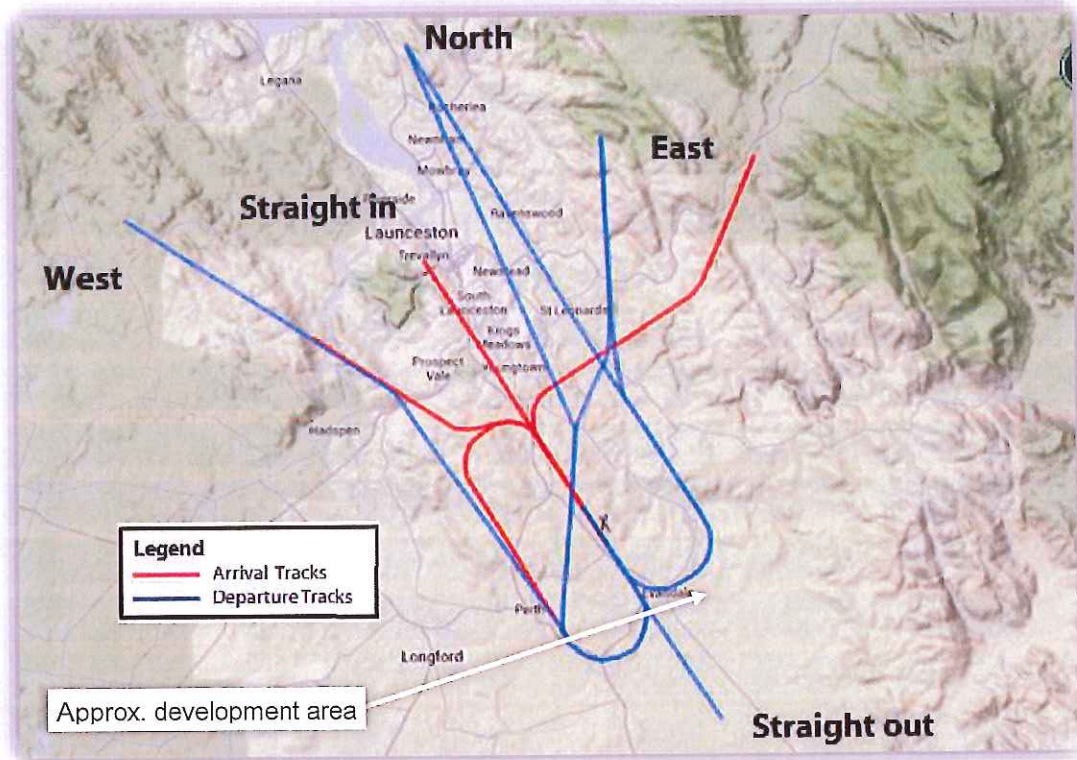


Figure 2-3: Flight routes facing the South-East during take-off and landing.

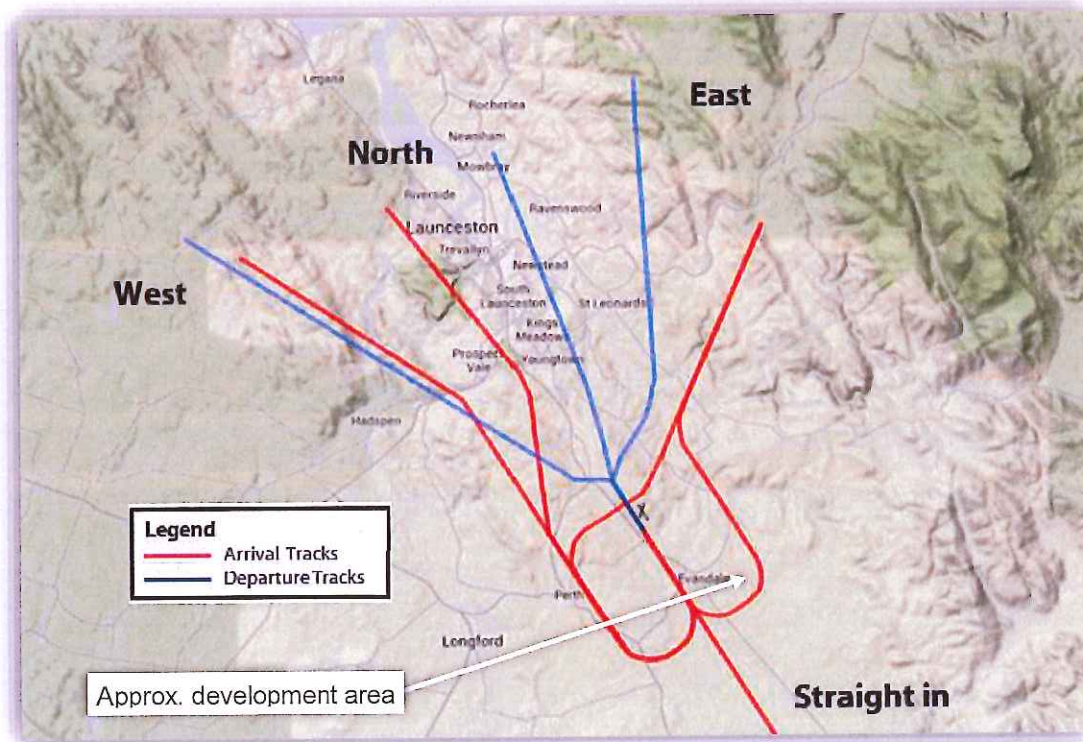


Figure 2-4: Flight routes facing the North-West during take-off and landing.



### 3. NOISE CONTOUR MAPS

#### 3.1 ANEF Contours

The Australian Noise Exposure Forecast (ANEF) contours system under AS2021 provides an estimate of cumulative noise exposure from an airfield averaged over the course of a modelled year. This data accounts for typical flight routes, frequency of use, aircraft type, tonality and duration among other factors to provide a noise exposure level (in ANEF units) at any given location. For readability, this is expressed in the form of contours which represent theoretical lines of equivalent noise exposure around an airfield. The forecasting of exposure is based on long range projections of airport operations (see the Launceston Airport Master Plan<sup>[2]</sup> for further detail)

AS2021 provides guidance in relation to acceptability of building types within ANEF zones. Figure 2-1 provides table 2.1 from AS2021 which defines the acceptability of building types within each ANEF zone.

**TABLE 2.1**  
**BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES**  
(To be used in conjunction with Table 3.3)

Building type	ANEF zone of site		
	Acceptable	Conditionally acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1)	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

**NOTES:**

- 1 The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variation in aircraft flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.
- 2 Within 20 ANEF to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate (see also Figure A1 of Appendix A).
- 3 There will be cases where a building of a particular type will contain spaces used for activities which would generally be found in a different type of building (e.g. an office in an industrial building). In these cases Table 2.1 should be used to determine site acceptability, but internal design noise levels within the specific spaces should be determined by Table 3.3.
- 4 This Standard does not recommend development in unacceptable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas designated as unacceptable, it is recommended that such development should achieve the required ANR determined according to Clause 3.2. For residences, schools, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.
- 5 In no case should new development take place in greenfield sites deemed unacceptable because such development may impact airport operations.

Figure 3-1: Acceptability of building types within ANEF contour zones.

Figures 3-2 and 3-3 provide aerial views with the most recent ANEF contours for the Launceston airport (from the airport masterplan<sup>[2]</sup> and provided in georeferenced digital format by the Launceston Airport from a study conducted in 2014) and the location of the proposed Ridgeside Lane subdivision and development.

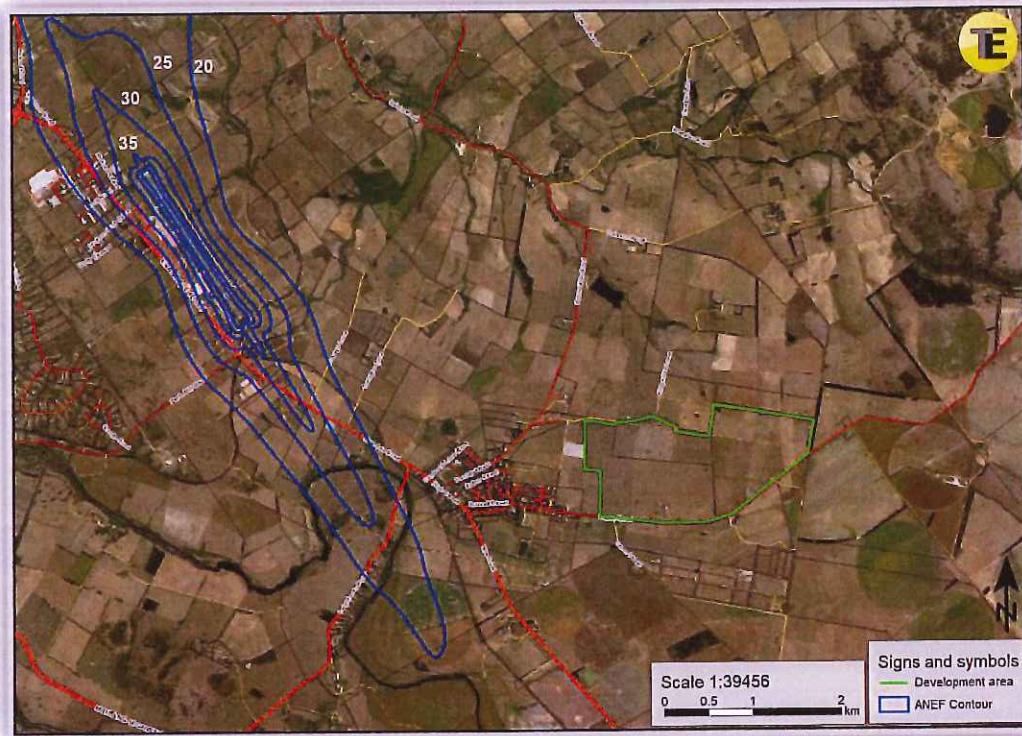


Figure 3-2: Aerial view showing 2014 ANEF contours for the Launceston Airport.

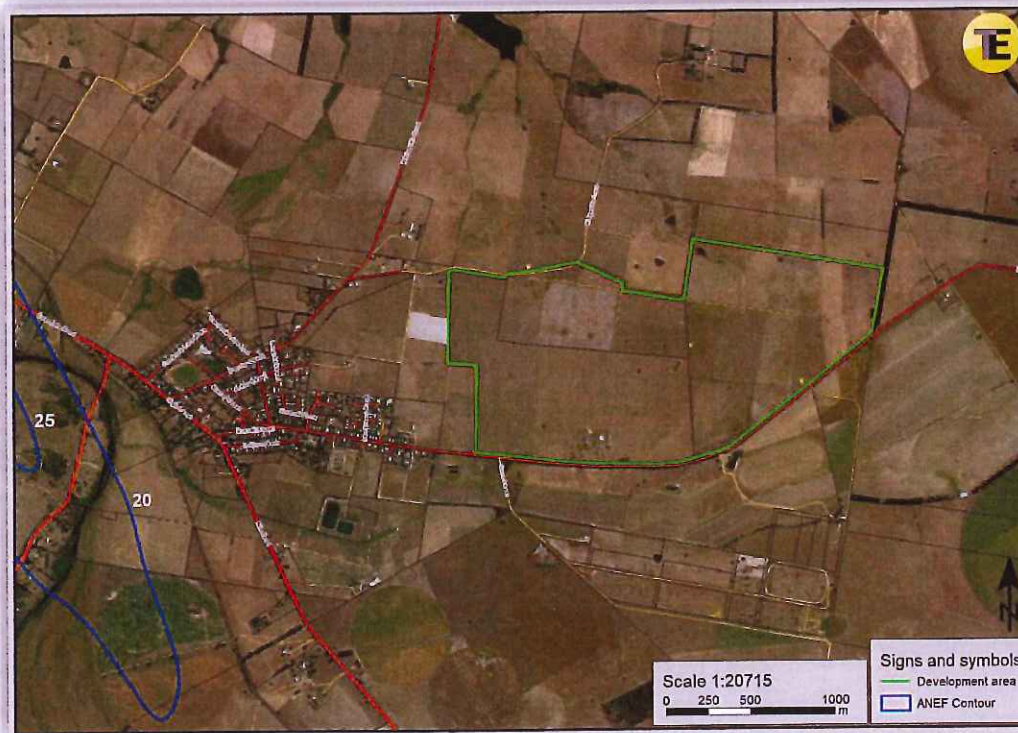


Figure 3-3: Aerial view showing 2014 ANEF contours for the Launceston Airport.



From the above the following is noted:-

- The Ridgeside Lane subdivision and development area is approx. 2 km to the west of the 20 ANEF contour.
- Buildings (all types) sited outside of the 20 ANEF contour are considered acceptable (i.e. no need for building construction to provide protection specifically against aircraft noise) conditional on Note 1 of the AS2021 table 2.1 (see figure 3-1).

### 3.2 'Number Above' noise metric

'Number Above' noise metrics were developed to complement the ANEF system by predicting actual noise levels at ground level during single aircraft movement events. It has been found that this system is more easily understood by the public and tends to better reflect the pattern of noise complaints surrounding airports.<sup>[1]</sup> Typically this data is presented as a set of contours that represent the number of predicted exceedances above a given noise level for an average day as follows:-

- 20 event N70
- 50 event N65
- 100 event N60

E.g. The 20 event N70 represents an area within which 20 or more aircraft noise events that exceed 70 dBA are predicted to occur in any given day. Again, as for the ANEF system this is a long-range forecast (see the Launceston Airport Master Plan<sup>[2]</sup> for further detail).

Figures 3-4 to 3-8 provide aerial views with 'Noise Above' event contours for the Launceston airport (from the airport master plan<sup>[2]</sup> and provided in georeferenced digital format by the Launceston Airport from a study conducted in 2014) and the location of the proposed Ridgeside Lane subdivision and development.

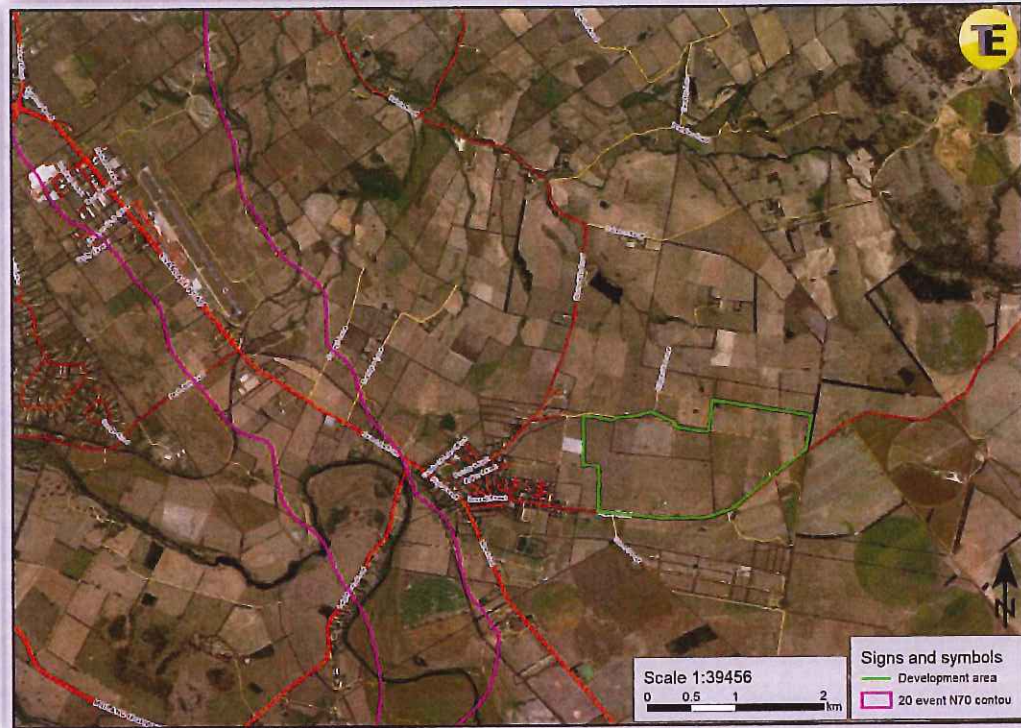


Figure 3-4: Aerial view showing the 2014 20 event N70 contour for the Launceston Airport.



Figure 3-5: Aerial view showing the 2014 20 event N70 contour for the Launceston Airport.

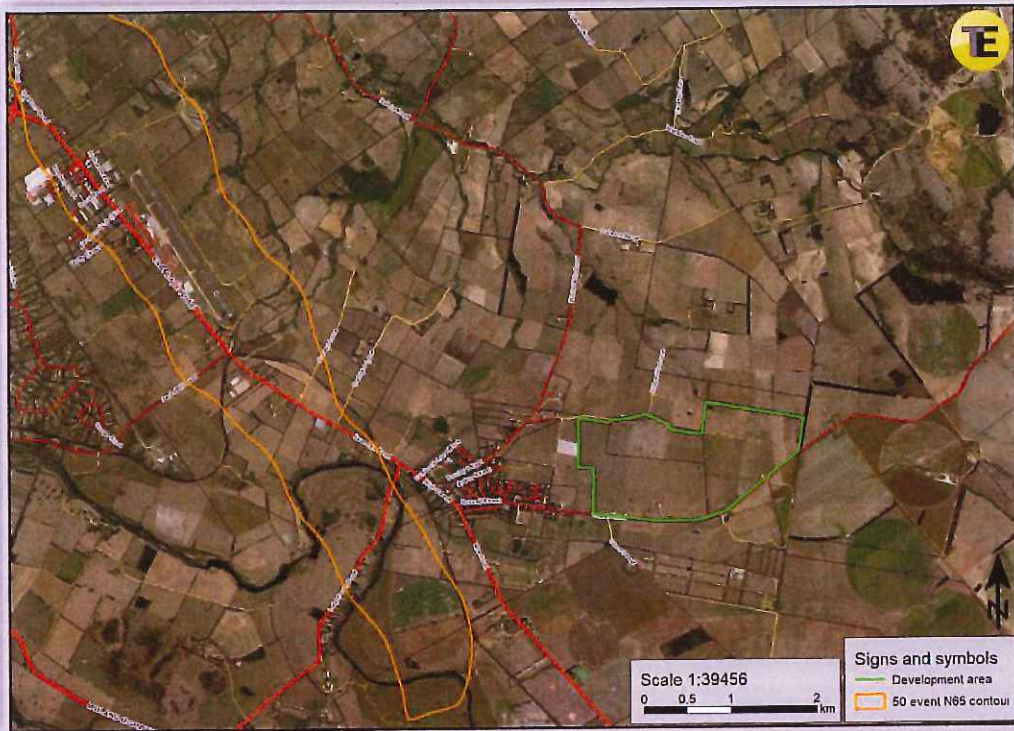


Figure 3-6: Aerial view showing the 2014 50 event N65 contour for the Launceston Airport.



Figure 3-7: Aerial view showing the 2014 50 event N65 contour for the Launceston Airport.





Figure 3-8: Aerial view showing the 2014 100 event N60 contour for the Launceston Airport.

From the above the following is noted:-

- The Ridgeside Lane subdivision and development area is > 1 km to the west and south-west of all three 'Noise Above' event contours.



## 4. CONCLUSIONS AND RECOMMENDATIONS

The proximity of ANEF and 'Noise Above' event contours available under the Launceston Airport Master Plan<sup>[2]</sup> indicate that aircraft noise intrusion in relation to the proposed Ridgeside Lane subdivision and development is unlikely to significantly impact amenity. As such, additional assessment and/or consideration of buffer zones and structural upgrades to buildings within the subdivision and development to attenuate aircraft noise is considered unnecessary.

**NB:** It should be noted that the while the land area of the proposed Ridgeside Lane subdivision and development lies well outside of the ANEF and 'Noise Above' metric contours presented here this doesn't mean that aircraft noise will be inaudible on the land and developers and users should be aware of this.

Special consideration is often given to night time noise events (between 2200 and 0600 hrs) with a fewer number of peak noise events potentially impactful through the inducement of sleep disturbance. Airport noise studies may choose to produce 3, 6 and 12 event N60, N65 and N70 noise contours to allow assessment of this.<sup>[1]</sup> Tarkarri Engineering notes that this information hasn't been provided in the Launceston Airport Master Plan<sup>[2]</sup> and therefore hasn't been addressed here. While this may not be of concern in relation to flight operational times at the airport, the land area of the proposed subdivision and development does lie under or close to some of the flight paths shown in figures 2-3 and 2-4.

## 5. REFERENCES

[1] National Airports Safe Guarding Framework Guideline A: Attachment [2016] (pages 12-13)  
Access at:  
[https://www.infrastructure.gov.au/aviation/environmental/airport\\_safeguarding/nasf/files/1.3\\_Guideline\\_A\\_attachment1.pdf](https://www.infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/files/1.3_Guideline_A_attachment1.pdf)

[2] Launceston Airport Master Plan [2015] (page 126)  
Access at: <https://www.launcestonairport.com.au/source-assets/images/launceston-airport-master-plan-2015.pdf>

I hope this information meets your immediate requirements.

Please contact me directly if you have any questions concerning this work.

Yours faithfully,  
**Tarkarri Engineering Pty Ltd**

**Dr. Alex McLeod**  
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# pitt&sherry

## **Regional Land Use Strategy**

Consultation with General Managers

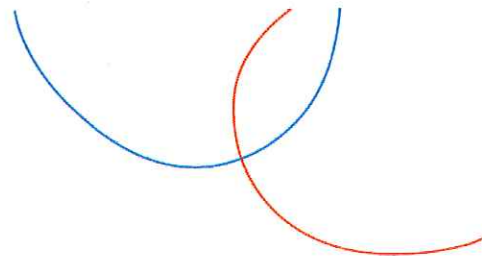
Prepared for  
**Traders In Purple**

Client representative  
**Brett Robinson**

Date  
**17 May 2019**

Rev 00





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Prepared by — Ian Abernethy

Date — 17 May 2019

Reviewed by — Leigh Knight

Date — 17 May 2019

Authorised by — Andy Turner

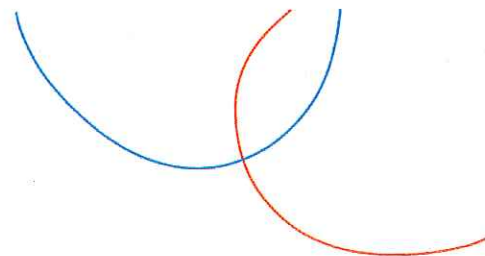
Date — 17 May 2019

### Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	Report for client	I. Abernethy	L. Knight	A. Turner	17/05/2019

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## 1. Introduction

Pitt&sherry have been commissioned to consult with General Managers within the Councils which make up the Northern Region of Tasmania in regard to development in their Municipality and whether they support or otherwise changes to the regional Land Use Strategy for the Region.

## 2. Purpose of this Report

The purpose of this report is to outline the methodology used in completing this exercise; to highlight the interview techniques; examine the questions asked and collate the answers received.

A study of this type is required because every request to change a zoning has to be supported by the RLUS for that particular region. To secure the required change Councils in the region have to agree to change the RLUS if the proposal falls outside of the current document.

## 3. Land Use Planning and Approval Act 1993 (LUPAA)

LUPAA is the main land use planning act covering the State of Tasmania. Since its inception in 1993 it has gone through many changes.

When presenting a request to rezone or amend a Planning Scheme there is a requirement under LUPAA that such a request is *as far as practicable, consistent with the applicable regional land use strategy*.<sup>1</sup>

## 4. Regional Land Use Strategy

The Regional Land Use Strategy (RLUS) is the statutory regional plan for Northern Tasmania. It applies to all land in the northern region of Tasmania.

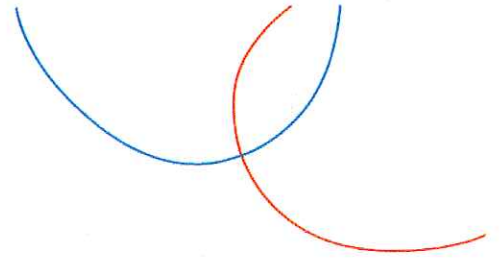
It sets out the strategy and policy basis to facilitate and manage change, growth, and development to 2032. Across the Northern Region the RLUS will guide land use, development and infrastructure decisions made by State and local government, and by key infrastructure providers.

The RLUS is a living document. As the strategy is implemented and results monitored, this document will be updated to reflect new and revised State, regional and municipal land use, policies, projects and initiatives.

The Minister for Planning declared the first edition of the Regional Land Use Strategy of Northern Tasmania in October 2011 and a revised edition was declared in January 2016 and again in June 2018.

---

<sup>1</sup> S34 (2) (e) LPS Criteria; Land Use Planning and Approval Act 1993



## 5. Ridgeside Lane

Ridgeside Lane is the geographic name for a proposed development on the eastern outskirts of Evandale township in the Municipality of the Northern Midlands. The development is a mix of uses within the classification of residential, tourism, commercial and aged care.

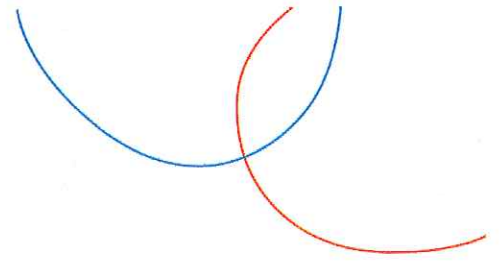
Traders in Purple, the proponents for the project highlight the following guiding principles for Ridgeside Lane:

- Evidence Based Planning
- Create Communities not Housing Estates
- Building Safe Communities
- Creating Diverse Communities
- Creating Healthy Communities
- Water Sensitive Urban Design
- Maximise Local Employment
- Integrating Transport Systems
- Infrastructure Cost Sharing and Multiple Use Facilities
- Enhance and Respect Local Landscape and Cultural Values
- Maximising Housing Affordability
- Maximise Opportunities for 'Ageing in Place'
- Create Legible Streets
- Solar Passive Design; and
- Create Accessible and Connected Communities.

## 6. Methodology

The selected methodology for seven of the eight councils was to seek a face to face interview with the respective General Managers of the councils.

In regard to Flinders Island initial phone discussions with senior officers came to the conclusion that a well-structured email with the set of questions and then a follow up phone call was the best method of gauging their opinion on this matter



## 7. Interview Questions

The interviews were based around a series of structured questions so that comparison of responses would be relatively simple.

The questions asked about the General Manager's opinions on:

- Overall Growth in the Region particularly in regard to population and residential uses.
- Growth in their municipal areas
- Barriers at the regional level to increased growth
- Barriers at their local level to increased growth
- The type of development they would like to pitch for their municipality
- How supportive are they of changes to the RLUS
- Taking into account Ridgeside Lane – is this the type of development they would be likely to support through a change to the RLUS; and
- Whether council has delegated power to the GM to determine whether to support changes or not to the RLUS.

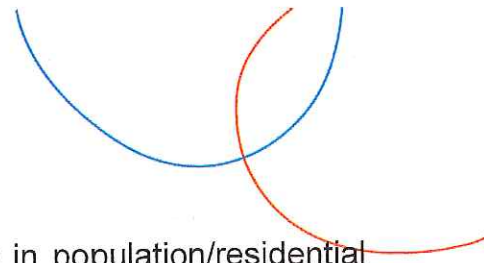
## 8. Responses to Questions

### 8.1 How do you feel growth in population/residential development is going in the region?

- Slow Growth in satellite towns around Launceston
- In line with expected growth strategies.
- Generally low – with a noticeable increase in recent months (2019)
- Steady – but to be a relevant region the growth needs to increase; and
- Our municipality does not have a view on regional growth.

### 8.2 Views on Growth in your municipality

- Been slow for a number of years – increase in recent months in some regional centres
- Stagnant – like many other rural areas
- Incremental – predicted to increase with irrigation; and
- Overall steady growth – the exception being Perth where demand is high, and land is in short supply.



### 8.3 What do you see as the main barriers to increase in population/residential development? Region

- Lack of Population
- Service infrastructure (water/sewer/stormwater)
- Jobs – particularly in the rural centres
- Road infrastructure; and
- Skilled work force.

### 8.4 What do you see as the main barriers to increase in population/residential development? Municipality

- Landbanking – need more willing partners to open up zoned land
- Imbalance between where there is infrastructure and where there is demand
- Jobs outside of Launceston
- Skilled Work Force
- Road infrastructure
- Focus has been (rightly) on infill. Now need to look to greenfield/brownfield sites
- Lack of correctly zoned land in key rural townships; and
- Outdated Municipal Land use strategy – needs review.

### 8.5 What type of development would you like to see in their municipality

- Tourism
- Appropriate Industry (both rural and urban based)
- Lifestyle living (rural councils)
- Retirees
- Good quality residential development in townships
- Agriculture linked to the new irrigation schemes
- Renewable energy schemes (windfarms and the like)
- The bypass (Perth) has thrown up opportunities for residential and commercial developments linking into the existing urban area; and
- A Regionally identified Sporting asset.





## 8.6 Would there be support for changes to the Regional Land Use Strategy that allowed other parts of the region to develop?

- Would have to be evidence based with good strategic justification
- Reserve comment until matter is determined by Council
- Worth having the discussion. Need to get all facts on the table
- Simple – yes – support any regional growth; and
- Changes have to be supported by the Local Planning Scheme and solid strategic work.

## 8.7 Introduce Ridgeside – ask directly if this is something they would support in terms of changing the RLUS

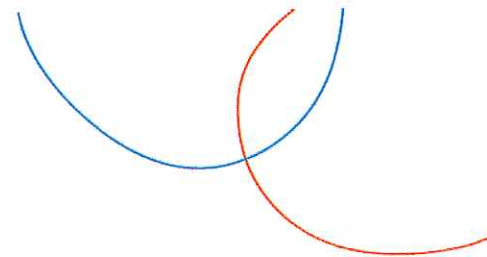
- Point of difference in Ridgeside is a good thing – so there is some merit in looking further at the proposal when presented formally
- Would like a full presentation before committing one way or another
- Would support any proposal as long as it is backed by sound strategic planning at the municipal level – supply/demand; need; etc.
- Simple – yes – support regional growth
- Like the idea of sustainable communities – but the presentation raises more questions than answers. It had been hoped that part of the consultative process would have been a direct presentation to each council (elected members) in the region. As a result, will reserve position in regard to this matter
- Will support any development which assists the region; and
- Yes – would support – growth in Evandale is not going to impact other areas. Unique product.

## 8.8 Do they have such power delegated to themselves or is it a council decision?

- The general answer was yes GM's would have delegated powers. However, in regard to this matter many felt it would be "testing" that delegation – so as a precautionary principal they would put the Ridgeside matter formally to Council. Would like to see a workshop type presentation to all the councils in the region; and
- Yes - and would use the delegation.

## 8.9 Any other comments on RLUS and or Ridgeside

- Looks like a well thought out project
- Any changes to RLUS have to be put forward by the relevant council WITH strong strategic justification – not a report by proponent of the development
- Should be handled the same as other RLUS amendments – impacted Council sends out letter to each council asking if they support or not – council replies
- A change to the RLUS needs to be justified with a supply and demand model; highlighting staging; likely annual take up; spread of infrastructure costs, etc.; and
- It is all very well to get one council to support a development (this one for example) and then that council gets local support to change the RLUS. The real test comes in getting the RLUS change supported through the Tasmanian Planning Commission and then getting support for the rezoning application.



## 9. Summary of Responses

It would be fair to say all General Managers (or their delegates) who had an opinion on regional growth felt that growth was low (around 1%). The same opinion held true for their own municipalities – with some even saying growth had stagnated.

The barriers to growth at the regional level included infrastructure (water, sewer, stormwater and roads). There was a general feeling a large population and more jobs would assist growth. These themes flowed through to the municipal level with landbanking and lack of willing partners being additional matters. Two municipalities cited their previous focus on infill development had now resulted in a lack of correctly zoned land.

The type of development each council would like to attract varied greatly – tourism, retiree, lifestyle living (rural councils), focus on agriculture due to irrigation scheme which has recently been completed in the area and specifically making good use of the Perth bypass – new housing and commercial areas.

In terms of changing the Regional Land Use Strategy there is majority support for such action if the changes are backed by solid strategic planning – an evidence-based approach to change. There were a couple of cautious comments around any changes to the Strategy – preferring to gauge their councils support. At the other extreme was the simple – yes support any growth.

Having talked the participants through the concept of Ridgeside there was varied comments from total support to reserved support for the idea. Ridgeside was seen as having a point of difference – the whole idea of sustainable communities. The point was made by two councils that development in Evandale is not going to impact on growth in other areas. A number of participants would like or would have liked a fully presentation by the proponents as there were many questions their elected members would have in regard to the development – why this land parcel? Who looks after the roads; water and sewer; parks and other non-money-making facilities? The sceptics saying, they felt the whole thing was not sustainable and would ultimately become a burden on one council. The key message was more information is needed and the proposal has to be backed by sound strategic planning by the council (Northern Midlands).

All General Managers have delegated powers to support changes to the Regional Land Use Strategy – but now felt they would use them in this case – citing too big a change; not enough info; questionable whether their council would support such a move and no evidence of strategic planning.

As a final question each participant was asked the open question about any other matters. The majority feeling was that changes to the Strategy have to be justified by sound strategic planning undertaken by the respective council – there will need to be a supply and demand model, likely annual take-up of lots and spread of infrastructure costs (to prove the project's financial viability). There was a feeling that this project (and indeed any other change to the Strategy) should be handled the same as others have been – the impacted council does the leg work and seeks support from the other councils – should not be left to the proponent to undertake this task.

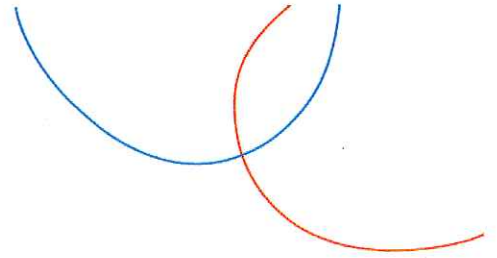
## 10. Conclusion

A relevant comment made by one council General Manager sums up perhaps how this project may proceed:

*It is all very well to get one council to support a development (this one for example) and then that council gets local support to change the RLUS. The real test comes in getting the RLUS change supported through the Tasmanian Planning Commission and then getting support for the rezoning application.*

It is clear that to move forward other councils, through their General Managers, are expecting much more in terms of strategic justification and consultation before they could comfortably recommend this project to their respective elected councils.

**pitt&sherry**



Regional Land Use Strategy

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Wagga Wagga



# Ridgeside Lane Community Engagement Report

JULY 2018

*'If I was to have imagined the land uses at the beginning, they would never have been as good as what we have in the concept plan. The outcomes are much richer for the contributions made by the community.'*

Charles Daoud, Traders in Purple

the**noa**group

[www.noagroup.com.au](http://www.noagroup.com.au)

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## Introduction

Traders in Purple are a private development company with major projects in the Illawarra Region of New South Wales and the Redcliffe Peninsula in Queensland. In May 2018 the company purchased approximately 245 hectares of land 250 metres east of the Village of Evandale. The site borders on Logan Road to the south and Ridgeside Lane to the north. Prior to planning the uses for the site the company decided to engage the community of the Evandale District in conversations on what they would like to see happen on the site. This voluntary engagement enabled initial site planning to incorporate the views of the community. 285 people participated in the activities, which provided an understanding of a range of issues, which then guided the development and further refinement of an initial high-level concept plan for the site. This concept plan will guide the research and further detailed information for a rezoning application to the Northern Midlands Council.

## Engagement Activities

The engagement plan included the following activities, which were facilitated by Lynda Jones and Bob Campbell from the noagroup:

- Mapping the whole system of the Evandale District. The whole system includes the organisations, groups and individuals that will influence or be influenced by the proposed development. This mapping exercise facilitated the development of a database as a key resource for communication, awareness raising and recruitment to engagement activities.
- Developing a communication plan, which included project narrative, audiences, mediums and scheduling. Included in the plan was the establishment of a dedicated project website.
- Scheduling face-to-face interviews with key stakeholders and local groups with leadership roles in the community. Examples include the Northern Midlands Council, the Evandale District Committee and relevant State Government agencies. A summary of the interviews is included as Attachment A (Input) and Attachment B (Feedback) of this report.
- Conducting four co-design workshops to identify community views on what they would like to see included or not included in any future development. Co-design workshops are a way for people to contribute their thoughts and ideas around potential opportunities, challenges and solutions for any development proposal. Co-designing starts at the beginning of the planning and guides the development of initial and ongoing responses.
- Specific briefings to Council and the Evandale District Committee on the project's advancement and the draft concept plan developed after the initial Input phase of the engagement.
- Conducting an additional Feedback phase, which involved three workshops where the draft concept plan was presented and additional comments sought.
- Throughout, the team responded to requests for one-on-one/small group interviews and combining these with the four co-design workshops, three feedback sessions on the draft concept plan and associated briefings, resulted in the total engagement of 285 people.

### At a Glance

82 interviews/presentations for input  
 110 input co-design workshop participants  
 70 feedback workshop participants  
 23 interviews/presentations for feedback  
 Overall: 285 people engaged

## Executive Summary

This Executive Summary presents the key issues from both the Input and Feedback phases of the community engagement program. The issues have been drawn from the outputs of the engagement activities and are qualitative in nature. However, they have guided and informed the development of the high-level site concept plan and have provided invaluable project 'grounding'. Areas where more detailed research and planning are needed have also been identified during the process.

The key opportunity the proposed development provides is the integration of economic, social and environmental outcomes. Successfully planned communities bring all aspects of life and living together to define their own sustainability and liveability.

The Evandale District and Village has an ageing profile and a reducing working aged cohort. Population growth is needed to sustain commercial and community services in the Village. The proposed new development has the potential to improve viability by attracting young families and working age people to live in the area. Increased commercial and community services will reduce the need for time consuming and costly commutes to neighbouring towns and to Launceston by residents.

The proposed development is a mixed-use project not just a housing development. The range of activities will broaden employment opportunities both during construction and ongoing. Opportunities for young people through apprenticeships and traineeships could be facilitated by the mixed-use nature of the development. There is also the opportunity to develop social enterprises within an area where people live

There is a strong focus on health and sustainability. The plan to utilise current and emerging technologies to be self sustaining and off the grid attracted interest and support during engagement discussions. The provision of an extensive network of extensive tracks and trails throughout the site will promote an active, healthy lifestyle that is attractive to residents and visitors

Both the positive and negative issues raised during the Input engagement discussions were incorporated into the site concept plan and consequently there was less tension during the Feedback sessions and more understanding of the development's aims. Younger residents in particular were encouraged by the potential of more housing choice and increased opportunities for their families. There was support for the attraction of more young families as the resultant population growth would increase support for local businesses, provide certainty for school student numbers and help maintain sporting and recreational groups.

A point of consensus was that 'the development should be about the children and grandchildren of existing residents'. This sentiment when joined with the principles of economic, social and environmental integration is a potent force for optimism about the development's potential contribution to the future of the Evandale District and broader Region.

Bob Campbell and Lynda Jones  
noagroup  
July 2018

### **Accessing the site**

This remains a key issue. There needs to be more than one-way in and one-way out of the development. An emergency services access point onto Logan Road is suggested. Consideration should also be given to the main entrance into the development being via White Hills Road and perhaps incorporating a newly constructed road around the Village. There was mixed feedback over the use of Logan Road for site access. During the input discussions the potential traffic pressures on Russell Street from a Logan Road access point were strongly raised. During the feedback meetings there was a softening of that view and a Logan Road access point was seen as beneficial for local businesses.

### **Housing**

This is essential for community viability. The number, density and mix of housing proposed in the concept plan was well received, particularly when considering that there are very few rental properties presently available in the Evandale Village or any new housing. In keeping with the Regional Housing Strategy an integrated approach including affordable housing is proposed and younger community members and families welcomed this.

All age groups need to be part of the development's future community, but there needs to be housing options for young families and working aged people. This would then support the regional migration strategy to address the challenges of an ageing population and decreasing working age cohort. The concept plan has positively responded to all these issues.

### **Energy, Water and Waste**

As much as is possible, the development aims to be 'off the grid'. The degree to which this can be achieved will mitigate any capacity challenges from existing utilities servicing the Village and will also be a point of difference for the development. The sustainable ideals of the proposed development are attractive to many people.

### **Name**

If rezoning is successful, the development should be named as soon as possible and the name communicated and promoted. The name Ridgeside Lane was temporarily chosen, as it is the property address.

### **Management and Maintenance**

The provision and sharing of considerable areas of open space by the community is a feature of the site concept plan and an idea embraced by the majority of people at the Feedback sessions. This contributes to the values of sustainability and liveability. Questions were raised about where the responsibility for maintenance and funding of the open space will lie once the development is established. Part of the development's sustainability and liveability ethos is that residents will contribute to maintaining open spaces and places because in doing so they help build both a sense of place and community. Many people liked this idea too.

### **The Airport**

Three areas of concern were raised by airport management and will be easily addressed:

- Potential residents need to understand the proposed new development is beneath the airport flight path and there will be aircraft noise, which won't change.
- There should be no area of water planned for the proposed new development that could potentially increase the amount of birdlife above current levels. (There is no area of water planned)
- Attending the Community Consultative Committee meetings to ensure there is an exchange of information and discussion over any concerns.



### **Tourism**

There needs to be a destination purpose in the end development; not something you come across but something you go to. According to the Launceston Accommodation Demand Study there is still capacity for extra beds in the area. Any accommodation facility could also incorporate a specific meeting/training centre with a focus on executive management and leadership development.

Agri-tourism is still the focus of tourism potential in this area. To that end activities which provide immersive activities involving capacity building, producers and makers, value adding and sustainability will be attractive. Essential to the development and also the future visitor will be the inclusion of 'best' connectivity and a recharging mechanism for vehicles and people movers.

### **Tracks and Trails**

These have been incorporated into the end design. They are the means to support active, healthy lifestyles and sustainable movement and transport within the development. They are desirable to many of the engagement participants.

### **Good Neighbours**

There is some concern amongst the surrounding farming community that a proposed development will create tensions between the 'right to farm' and the 'right to live' the way people want to live. These concerns will be best managed by maintaining dialogue between developers and farmers during the detailed planning stage and farmers and residents as the project develops. There is also the suggestion that engaging an expert agronomist to study the current and future farming practices in the area would help develop recommendations to minimise potential impacts between neighbouring farmers and residents. The use of buffer zones and various types of fencing have already been discussed.

## Engagement Phase 1: Input

### Interviews: Summary of key issues raised

Prior to the first round of community co-designing workshops, interviews were held with a number of regional stakeholders, community organisations and individuals and contact was made with over 80 people. A record of the interviews and key issues raised is in Attachment 1 to this report. A summary of the key issues raised during the interviews and conversations is set out below.

#### Evandale's character

Many people moved to Evandale for its heritage, beauty and quietness and there is a fear that this may be compromised. The concern is that any proposed development would end up bigger than the Village and therefore the Village would be lost.

Evandale is a heritage village, which attracts visitors. There was concern that an increase in population associated with any proposed development would detract from the heritage character of the town; that any development may prove inappropriate; that Evandale remain a 'walking Village', as opposed to a 'driving Village'.

It was also suggested that perimeter areas of the development back onto activities, which would improve liveability.

#### Roads

Beyond the airport, the road leading to Evandale deteriorates in standard and is not considered adequate by Evandale residents. Any increase in traffic due to population growth in the Evandale District has the potential to exacerbate the situation.

The Northern Midlands Business Association has also been lobbying for the upgrade of roads in the area to reduce travel time from 'paddock to port'.

#### Traffic in Evandale Village

The concern with any proposed development is using the Village as an entrance and the associated traffic that would be generated.

There was concern over access to the proposed development site. It was considered that Russell Street would not be able to take any extra traffic as the volume of cars, trucks and people competing for space already challenges it. This is highlighted each Sunday when the market operates.

#### Utilities: water, power and sewer

The provision of utilities to service extra population is a key concern as there is limited capacity in the existing Evandale Village services. Aiming to be 'off the grid' was well-received.

#### Agricultural land

A view was expressed that agricultural land should be used to grow food not houses.

#### Jobs and apprenticeships

The area needs local jobs and apprenticeships especially for young people and if this could be incorporated into any proposed development it would be positively received.

#### Population

Evandale has an ageing population and is predominately a retirement village. This potentially threatens the long-term sustainability of the school, services and commercial activities. There is a regional strategy to increase population through immigration to address the issue of a diminishing working-age population.

### **Housing and livability**

Housing development should take an integrated approach with a variety of options, including affordable housing. Housing affordability is an issue.

The development should be 'pitched' at telecommuters where people live and work from an area of high lifestyle and livability.

### **Healthy lifestyle**

Any new development should incorporate green open spaces, tracks and trails, provision for active transport, community gardens for fresh food and sport and recreation facilities. The Evandale Football Club has successfully moved into female football and is presently outgrowing its present facilities.

Revegetation of the area was also seen as part of a healthy lifestyle with the connection made between a healthy environment and human health outcomes.

### **Tourism**

The projected demand for visitor accommodation in the Region over the next 10 years is 500 rooms and after factoring in proposed Launceston developments there is still opportunity for 200 rooms.

Agri-tourism is a focus for the area, the aim being to create immersive experiences around produce, producers and value adding.

### **Evandale Village viability**

Commercial viability is challenging particularly during the winter months. Additional service and retail outlets have often failed e.g. service stations and butchers shop. At one stage the local supermarket closed. There was concern that Village commercial activity would be replicated in any new development and increase competition in an already challenging commercial environment.

The viability of the school and having enough students to ensure its future is also a concern to many people. A social enterprise, perhaps working with a not-for-profit, might provide good outcomes for all.

### **Past planning and the present Planning Scheme**

There is an agreed town boundary, outside which the Village should not expand. Also within this boundary there is a population cap of 2000. There were concerns that this planning framework that had taken a long time to agree was now being ignored.

### **The development's address/name**

The 'working' name of 'Ridgeside Lane' for the project was used because the site borders on Ridgeside Lane – its address. There is also a nearby property called 'Ridgeside' and there was confusion over why that name was being used. Many would prefer an alternative name be given to any proposed project.

### **Ongoing costs**

There is concern over who will pay for the ongoing maintenance costs of gardens, parks, open spaces, track and trails. If this fell to Council there was an added concern that rates would be increased to pay for additional maintenance.

### **Launceston Airport**

The three issues raised by airport management were making it clear to people living in any proposed new development that they are on the airport flight path and there will be aircraft noise that will not change; safety over establishing any body of water which would attract birds which are a safety hazard for air traffic; and the airport retaining good relationships with the community.

## Co-design Community Workshops: Summary of Key Issues

Around 110 people attended the four workshops. They were held at various times to maximise convenience on Wednesday, May 23<sup>rd</sup> and Thursday May 24<sup>th</sup>. There was a separate meeting with the Evandale History Society and volunteers from the Information Centre held Thursday, May 24 to coincide with their regular monthly gathering. People were asked to register for the workshops to help with the formation of workshop groups and inform catering needs. The workshop process was organised around the exploration of themes, with project team professionals working with community members. Each participant had the opportunity to contribute to each of the following four themes: Infrastructure; Character; Residential Options; Uses and Opportunities. A summary of the issues raised by participants is set out below:

### Infrastructure fit for purpose

#### Roads and traffic:

- This is a key concern. There is a fear that any proposed development will generate traffic pressures on Russell and Barclay Streets. There was strong opinion that the Evandale Village centre not be used as the 'through-road' to access any proposed new development. There is also a concern that increased traffic will tax existing Village roads.
- Russell Street is integral to the heritage character of Evandale and is also the commercial activity hub. However, it is narrow with restricted parking, driver line of sight concerns and heritage amenity. The Sunday Market creates parking issues and restricts traffic movement and whilst this is generally accepted, people 'don't want Sunday, everyday.'
- The intersections of Russell and Barclay Streets with High Street also have line of sight concerns at current traffic levels. Nobody wants to see a roundabout or traffic lights.
- Barclay Street does not have the parking issues of Russell but does pass by the school. It also has truck traffic.
- A traffic study is needed.
- Vibration from trucks may potentially damage heritage buildings and homes.
- The use of Cambock Lane is limited as an access point as it is a narrower residential street.
- A solution that diverts traffic around the Village would be ideal but the density may not justify the capital cost. Creating a connection from Ridgeside Lane through farmland north of Cambock Lane to the Leighlands Road / Evandale Road intersection was suggested.
- Evandale Road beyond the airport narrows; there are no white lines and there are grade issues around the rail crossings. The Community and Council would like to see it upgraded. The creation of a 'Ring Road' to the Leighlands Road intersection might provide a catalyst for Council and State Government funding for such an upgrade.

#### Water, sewerage, storm-water and waste management:

- Will the existing infrastructure be able to accommodate a large increase in population?
- The sewage treatment plant is ageing, located in the flood plain of the South Esk River and considered to be close to capacity. TasWater manages it.
- Water pressure is good on White Hills Road but patchy across the Village. There are some quality issues for those living in Trafalgar Lane.
- Councils have retained responsibility for drainage and storm water.
- There is a Waste Transfer Station on Logan Road adjacent to the southern boundary of the site. It was also mentioned that a previous landfill and hydatids testing site might be located on the eastern end of the site on Logan Road. The exact location will need to be determined so testing can be conducted.
- There was support for storm water retention and reuse in any proposed development.
- The notion of any proposed development being self-sufficient and sustainable was generally well received and considered feasible given the rate of technological advancements.

- The ability to connect any proposed development with existing water and sewer infrastructure will need discussion with TasWater.

## Character

### Village comes first

This is a description of Evandale's character by a resident and workshop participant.

*'Evandale is an historic village in a peaceful, rural setting. The leafy, green trees provide cool shade in summer and beauty all year round. It is peaceful, quiet and safe. The landscape surrounding the Village gives us views of mountains, rivers, and productive farming land. The sounds you hear are of cows bellowing, and our kids walking together, riding bikes and playing. Evandale is a creative, enterprising community and there are many 'big' personalities. We stage national and international events like the Penny Farthing races and Glover Art Prize. What is unique about Evandale is the people, their stories, convict history, churches and our historic Village with its cosy, quiet laziness. There has been steady and considered development in Evandale since its establishment. Steady and staged growth is the favoured approach. A steady, staged increase in population within the agreed limits, with the potential of extra families living in the area and jobs that might be developed and maintained would be good.'*

### What was liked?

- Greenery, open space, trees and gardens. Trees you can eat. 'In Sorrento the streets are lined with lemon trees.'
- Development that is subtle and respectful of the 'neighbouring' historic Village of Evandale
- The development to be surrounded by the landscape, which can be seen wherever you are; this is integral to the character of the District.
- A community focus, parks, walkways, something for families and children
- Underground power
- Good standards of design and construction
- A fire buffer zone, and a community preference to separate any new areas. 'It should not be an extension of Evandale but separate to it.' This also raised the question of a separate name, which has not been determined.
- The potential green belt to contain tracks, trails and paths that link to the Village and to existing tracks and trails which facilitate active transport, health and wellbeing outcomes. Many were positive about this.
- Facilities that help build community.

### What was not liked?

- The look and feel of a suburb.
- No concrete jungle!
- High-rise developments
- A place like Grindlewald with gimmicky themes
- Bright colours that clash with the landscape and Village
- Big fences and colour bond fences
- Big houses on small blocks
- Blocked views
- A great big hotel

## Residential Options

- Previous planning studies resulted in the recommendation that population in the Evandale Village be restricted to 2,000 persons. The present population is estimated to be around 1,400.

- There is limited supply of new housing and land for sale in Evandale. Housing development is happening nearby in the municipality at Perth and Longford.
- Residential options should cater for all ages and stages in life. There needs to be a mix and diversity. Density however is not favoured.
- To attract families, housing will need to be affordable. This implies smaller lot sizes. Currently the Village has an ageing profile. More young families would help secure the future of the school and eventually the Village. 'If we lose the school, we lose Evandale'.
- There is a tension between small lots and bigger lot sizes. Generally the Devon Hills or Leighlands Road sizes with the traffic problems resolved had support. That however may not address affordability.
- Some objection to grid pattern streets and cul de sacs.
- Ageing in place should be facilitated by the housing options. There was discussion around a Glenara Lakes aged care facility with a mix of independent living and supported care facilities set in landscaped grounds. This got a mixed reception.
- There are examples of areas where building design guidelines are set and covenants placed on buyers to ensure the character of a place is maintained. There is scepticism over how this would be enforced and achieved over time.

### Uses and Opportunities

- The Village of Evandale has lost services over time: 'We used to have two service stations, we need a pharmacy, the butchers shop closed and the general store even closed for a while. If the numbers of children don't increase the school may become vulnerable. There is no police station. We could do with increased access to doctors and dentists. Without growth Evandale runs the risk of continued service decline.'
- 'We don't offer enough to tourists to keep them here for very long.' However the community hosts two iconic events with the Penny Farthings and Glover Art Prize. There was some enthusiasm to restore the historic water tunnels.
- A view was expressed that there was no desire to be like the Village of Richmond (outside Hobart) with its 'tacky shops' and high visitor numbers.
- An event, conference or wedding venue was suggested. Weddings could strengthen existing businesses.
- The Agrarian Kitchen (Derwent Valley) concept showcasing local produce was mentioned. In the 1980's Evandale supported two fine dining establishments, Casey's and Russell's, which brought visitors to the Village.
- Artist studios and exhibition spaces to build on the 'Glover' reputation were suggested.
- In broad terms however, there were no consistently strong tourism ideas.
- There were many more suggestions around recreational and community facilities and they included: a 36 hole golf course, sports oval, swimming pool, a men's shed, walking and cycling trail including mountain biking and an outdoor gym. One participant suggested that there was the potential for 8 km's of trails around the development site that could link into the Village and existing trail networks. A 'country-club' style centre with community spaces was suggested and was also seen as a facility that would have a positive impact on community building.
- Landscaping, parks and open spaces linked by walking trails, playgrounds and an outdoors event space were mentioned. An arboretum could enhance the landscape.
- One participant stated that the first public library established in Australia was at Evandale and suggested a community engagement space reflecting that history could be established.
- It was stated that the soils on the northern aspects of the site are suitable for grape growing. Keeping some part of the site for agricultural and rural uses was generally supported.

## Phase 1 Summary: What we heard from the engagement

### INPUT stage

Combining the insights and understandings of both the interview process and the co-designing community workshops the following list summarises the first stage of the engagement's INPUT stage.

- Approach development as it has been done in the past: steady and staged.
- Understand the land and landscape from the perspective of the Aboriginal community.
- The natural environment and surrounding landscapes was a common thread throughout discussions and should be an integral reference point to any considerations.
- Develop separately from, but in sympathy with, the Village. Good design, construction, a subtle colour palette, lower density and respect for the existing heritage is favoured. There needs to be a green zone of separation between Village and New and this provides the opportunity for linkages and connections through tracks, trails and parklands.
- A major issue is the concern around traffic pressure on Russell and Barclay Streets that may be caused by any development associated with a large increase in population.
- An off the grid, self-supporting settlement using modern technology may overcome any challenges with sewer, water and energy.
- Landscaping, green open spaces and recreational facilities are supported. Tracks and trails in particular would promote active transport, health and wellbeing.
- Affordable housing and opportunities for young families would help safeguard the school. Places and spaces for families and young people are needed. The development should be about the children and grandchildren of existing residents.
- Keep part of the site as farmland, vineyards may be the opportunity, but also specialised local produce as the focus.
- Evandale like Tasmania is ageing and ageing in place facilities are likely to be in demand. This has implications for residential options.
- Build on Evandale's history, events and rural produce for tourism in line with a 'heritage to harvest' concept. Mass tourism is not popular.
- An alternative name for any development, not Ridgeside Lane.
- In all planning, be mindful of the Airport requirements.

## Phase 2: Feedback

Following the engagement program's INPUT stage, the project team worked to translate the understandings into a draft, high-level concept plan. This concept plan was presented to community and stakeholders at the beginning of June 2018 for further feedback. Below is a summary of the key issues or questions raised during the feedback workshops and presentations.

### Presentation and feedback workshop: Summary of Key Issues Raised

Three workshops were held on Wednesday June 6<sup>th</sup> 2018 and 70 people attended over the three sessions. The high-level draft concept site plan, developed following the co design workshops was presented and explained.

Working in groups, participants were asked to say what they liked about the concept and what they were not sure about. The key issues from these discussions are set out below. The numbers indicate the number of times an issue was raised. The main like was the provision of tracks, trails and community facilities. The main area of uncertainty was road access and traffic.

### Likes

#### Tracks, trails and facilities (10)

The ability to walk and cycle to Evandale Village and to be active within the project by cycling and walking on tracks and trails amongst lots of trees was popular. An amphitheatre, performance space and training centre were liked. There is interest in a swimming pool being provided.

#### Housing (7)

The housing design is compatible with the area. Not high density housing and not as many as 1,000 homes. Good variety of lot sizes and integration of living.

#### Sustainability (5)

The emphasis on sustainability and the eco focus particularly with energy

#### Population (2)

The development will assist with local population issues.

#### Community spirit (2)

The development encourages a strong and safe community spirit.

### Not Sure

#### Road access and traffic (23)

Road access and generation of traffic is the key issue. There is debate over vehicle access from Logan Road. Some want it, others don't. Emergency services queried the safety of having only one way in or out. A gated emergency access onto Logan Road was suggested. The need to upgrade Evandale Road between the airport and the Village was also raised.

#### Development certainty (8)

Who is going to own and operate the development and what happens if you get to a certain stage and then sell to someone else? Is the project economically feasible? How can you be confident to make such a long-term commitment?



**Housing issues (8)**

Should there be covenants in place to control the standard and style of homes?

The provision of social housing in the community draws mixed views and what a lot of moderately priced houses mean? What will Council say about rural residential blocks? What are the implications for my house?

**Future Maintenance of the land (7)**

How will the open land and gardens be maintained and by whom? Do the residents look after the open space? How will the subdivision of large blocks later be controlled?

**Facilities for young people (7)**

What facilities are planned for young people on the site - skate parks, mountain biking, bike trails, and BMX tracks?

**Waste and services (6)**

What is the waste management plan for the site? How will water be provided?

**Don't lose the countryside (6)**

What impact will there be on the countryside and environment? This is the countryside and we don't want to lose it.

**The plan and zones (5)**

What zones are you proposing and how does the project affect the rural classification of Evandale?

**Risk to agriculture (4)**

How will the development interface with adjoining agricultural enterprises? There is a potential risk to agriculture. Need to protect right to farm.

**Commercial activity (3)**

What commercial activities are intended in the project? Will they be at detriment to local business?

## Attachment 1: Record of Interviews held during the input phase of the engagement activities

### Chris Griffin: CEO Tourism Northern Tasmania

Accommodation Demand Study commissioned by Office of Coordinator General outlines the need for 500 rooms over next 10 years. After taking into account the addition of the Silo Hotel and the proposed Joe Chromy Hotel the area will still be short 200 rooms. NTT is working on the area's core attributes – heritage, productive landscapes, harvest. History is still a focus but only with the 'harvest' connect. Just focusing on a heritage town doesn't work - hard for communities to maintain and needs to be linked to something. NTT is also working with the Aboriginal Community around establishing walks relating to produce and landscape. Free settlers, not convicts, populated the Midlands. Many families are multi-generational residents and have a long and credible relationship with the area. Agri-tourism is a key opportunity - create immersive experiences; merino fine wool; distillery activities e.g. whisky and gin; wine; growing food; growing/using native and heirloom plants; meet the makers and producers.

### Ian Goninon: Councillor and President of the Northern Midlands Business

**Association (NMBA)** Please note: it was stressed and understood that this meeting was in the context of Ian's involvement with the NMBA not the Northern Midlands Council. Ian commented that there was confusion about the proposal and specific questions raised by NMBA members were:

- Where is the location?
- If it doesn't go ahead, what will you do with the land?
- How will access be managed?
- Existing roads won't cope
- What size are the lots?

The NMBA has been lobbying for some time to upgrade roads to reduce the travel time of produce to port. There is a need to extend the airport road beyond the airport because the present road cannot cope with the existing volume. Any increase in traffic will exacerbate the situation. Any additional support for road improvements would be welcomed.

The area needs new jobs and apprenticeships for young people

### Evandale Rotary Club

Questions raised

- Are they residential blocks?
- Will there be rural blocks?
- What about aged-care blocks?
- What sort of zoning do you need?
- What about the roads going in and out? (This is a key issue)
- How much green/public space will be allocated?
- Have you bought White Hills Ridgeside?
- How will you access it?
- Can you put 'ticker-tape' up on the land you have bought so it can be identified?
- What about power, sewage, water? How are you going to accommodate that?
- Are you part of the Blessington Road development?
- Will all dwellings be built or could you buy a vacant lot?
- What similar projects have you done that we could look at?
- What would the project start time be?
- Would you establish a nursery at/near the house?
- How many people?

- You must have done the projections and know what you are going to do?
- Will you be using wind energy and building turbines?
- Will you have shops as part of the mixed-use?
- We don't want a whole lot of people coming into the Village and making everyday a 'Sunday'.

**Maree Tetlow: CEO NTD**

NTD taking an integrated approach to development and are keen to see any new housing take the same approach. Also working on an economic strategy for the region, which is highlighting the need for population growth (which will require housing); responding to tourism demand and social and health issues.

**Lucy Byrne, Managing Director, Healthy Tasmania**

Focus is on health as an economic driver and the need for the State to improve their health outcomes

- Link to Evandale and provide healthy lifestyle opportunities; create a circuit that joins Logan Road, Nile with Leighlands and make use of existing tracks and trails. If there was a trail along Leighlands Road it would make a substantial running, walking, cycling circuit.
- Build understanding of the 'drivers', viability of Village; school numbers;
- Community gardens, landscaping
- Historical connections e.g. to Glover
- No duplication.  
Many deer in the area: could be a 'wildlife attractor'
- Recreation: tennis (cardio tennis), gym equipment; outdoor hoops; playgrounds; mountain bikes, trail running

**Jane Shaw, Ingleside Bakery**

Businesses find winter months very difficult. Had a butcher but it closed. More locals would influence the kind of retail and services offered and the viability of the Village as a small 'activity centre'.

**Frank Deane (Resident)**

Frank highlighted the work that had been done in setting the township boundary and also the population cap. He would like to see a golf course incorporated into the end design.

**Evandale Football Club**

Club was dwindling in numbers and so moved into female football

Now has a need to expand facilities

- Need bigger change rooms
- Could explore incorporating new facilities as part of a new development
- Raised community concerns: traffic, loss of Village atmosphere; too close to Village, competition
- One member, related to the person whose property is called Ridgeside, was upset that the name had been used for the development

**Neil Grose CEO and Tim Holder, Chairman, Launceston Chamber of Commerce**

Chamber is keen to see increased airport capacity for logistic solutions. Roads beyond airport are an issue. Opportunities for Launceston and Northern Tasmania: new international players; building identity; need smart investors; address winter months, accommodation at airport. New economy where people will be working from home and the north gives a great lifestyle benefit Opportunities for inclusion in the development

- Incorporate a social enterprise into the mix of use

- Establish a sculpture Park as part of the botanical gardens
- Making lighting a feature
- Digital capabilities for the digitally enabled worker

**Coordinator General's Office: John Perry and Catherine Murdoch,**

This meeting took the form of a briefing where the idea of a proposed development was outlined to members of the Office.

**Launceston Airport Peter Holmes (Operations), Ilya Brucksch-Domanski (Planning) and Paul Godier Planning Manager Northern Midlands Council (on phone)**

Airport does not come under the Northern Midlands Council Planning Scheme but Air Services (Federal Government) however development applications near airport are always done in collaboration with the Northern Midlands Council. Want to make sure people who buy in area understand it is an airport precinct and there will be noise. Don't want to have people complaining and trying to get things changed. Need to make it clear; clearly advertise as stipulated in the Air Services Act 1995.

If Launceston/Tasmania was successful in the bid for the Qantas Air School, could mean an increase of workers into the area and more traffic

Airport is responsible and engaged with local community and we don't want this to change. We are a community asset.

The road past the airport is not good. Already decreased speed on road. Locals do not like the roads. They are narrow and in last two years there has been 2 crashes near the railway crossing.

There is concern regarding safety in relation to birds. Bodies of water attract birds. Have been incidents with swans. Swans migrate east to west. If there were another body of water in-between they would use it. CASA dictates we measure and monitor birdlife within a 15k radius. At Evandale, birds are at flying level. Other wildlife hazards include wallabies, peacocks, wombats, and hares. We are very conservative about bird and wildlife hazards because of safety.

Hobart has built a hotel to accommodate early flights but it's not doing well. Launceston is a destination, not a stop over.

Airport is looking to develop their vacant land.

The road upgrade between Breadalbane to airport will be duplicated but not beyond. This was an election promise.

Airport consultative advisory committee meets every six months. TIP representatives are invited to attend and update everyone.

**Angus Douglas (P&F member, local farmer)**

Sustainability of the area needs to be proven and understanding longer-term trends in relation to an increase in the number of families would be helpful.

The area needs re-vegetating. There is a lot of native authenticity and understanding of vegetation; corridor ethos – reference to bioregions; habitats; re-generative agriculture

Area points to the hills and therefore need for an organic shape

For liveability, the perimeter areas need to back onto activities

**Johannes Verhoeff**

Development to be neat, tidy and simple

Narrow streets in the village, walking village – car is not king!

Fancourt in South Africa is a model and is like a walk through the country from village to village.

Langezandt outside Cape Town and also Kievits Kroon in Pretoria are examples of well-designed developments

**John Kirwin, CEO Royal Flying Doctors Service Tasmania**

Tasmanian has an ageing population and Evandale is a retirement village

Traffic, parking and roads are the key issues

Plans for Western Junction: rails, all facilities; Airport is starting their master plan next year;

airport used to be busy for freight but that has changed to boat. If Western Junction development goes ahead then people will need to work and live somewhere.

Pitch development at the 'telecommuters'; housing affordability will be an issue; need good school and healthy lifestyle.

**Chris Byrne and Chris Concade Hangar 57**

The two Chris's are making whiskey in the old Ansett hangar at the airport.

They are at the early stages of their marketing efforts.

They will soon start looking for outlets to sell their product.

**John Clements: Missiondale**

Missiondale runs a rehabilitation program

Clients are usually in the program for 3 to 12 months

Range of activities include market gardening

Looking for other activities around horticulture skills development

Might be opportunities for skill development within the nursery or agriculture

**Peter Wolfe and James Abbott (Glover Society)**

Evandale has the highest residential prices outside Launceston

Where you are going to build overlooks the transfer station; land looks down on it

If get 30k winds, plastic gets stuck in the trees

Sight line for land to waste transfer station

Map needs to be adjusted as things look like they are there when they're not

Only people with money can afford sustainability

Where will the storm water go?

Solar panels need to be cleaned

**Evandale History Society**

Volunteers from the Information Centre joined society members

The following comments/questions were raised

- What did Council say you needed to provide them?
- There is no official application as yet
- The solicitor said that you don't own the land. Do you?
- Evandale feels like a community. 'I came here because of the heritage, beauty and quietness of the Village. Lot of feeling about that and people are concerned and scared that it will be taken away
- Traffic and using the Village as an entrance is the key concern
- Don't want any other days like Sunday
- What size blocks will you have down there?
- This terrifies me – it's larger than our Village
- You are not welcome here!
- Many of us see you as a 'nuisance'
- We need land to grow food, not houses
- Are you aware of Pitt and Sherry's report?
- There is a great deal of confusion
- A town that size (no size specified) needs a 'hub' – this will compete with and destroy the main street of Evandale

- The information says that the proposed development is kilometres away but it's not – it's on the edge of the Village
- Everything TIP does is 'high rise' – are you going to do that here?
- Who will look after the botanical gardens?
- What about flooding?
- What do you mean by affordable housing?
- Ongoing liabilities get passed onto Council and ratepayers
- Grey water – pump breaks down – who pays?
- What is design in sympathy with heritage values?
- Have you made contact with the irrigation?
- If you do this and then leave or sell to someone else, we have to pay for it all
- Impact of using water for domestic use
- Have you been to see the Coordinator General?
- Any meeting with Planning Commission?
- Are there offshore investors?
- Beneficial for land to remain rural land without residential
- There is a rumour that Launceston airport is to be made an international airport
- Perth and Longford already have plenty of land for housing – they can't sell it
- Launceston has an amalgamation agenda
- Planning Scheme has the 'village on the hill' and we want that to remain
- Council have held two closed meetings on this development
- Ridgeside is the name of an existing property

## Attachment 2: Record of feedback presentations and interviews

### Northern Midlands Council presentation

#### Questions raised

- Where will you put the battery bank?
- Will people drive White Hills Road into Launceston? Or is an alternative route planned?
- Would tourists want to go into this development?
- Will you be replicating retail? E.g. two supermarkets? (Don't want to end up like Devonport)
- Where does your land start and finish?
- Who determines the building standards?
- What are the next steps?
- What comes to Council in July?

#### Comments

- Russell Street is impossible. You need to solve entry into the site. This is fundamental
- There is opposition. However, some people like the idea, but won't say
- There is a fear of losing the school
- Jobs and kids is what the community care about
- Barclay Street and growth – still want children to be able to get to school
- Building and apprenticeships would be very beneficial
- Farmers use Logan Road
- The fire brigade will need more resources and up-skilling to handle the increase in population
- There is no ambulance station. Would be good to address that
- Move the existing sewerage station (need to discuss with TasWater)
- Council will have a workshop prior to the meeting when the application comes in and then move to a formal Council meeting

### Evandale Advisory Group

#### Questions raised:

- How wide is the buffer?
- Houses in Logan Road will lose their view
- Will the developers provide the trees?
- Will the developers provide and maintain the botanical garden?
- Who maintains the whole thing?
- Who came up with the name Ridgeside?
- Will you consult regarding the name?
- Off the grid? Will there be wind turbines?
- What do you mean by affordable housing?
- Will there be different rate calculations to the rest of Evandale?
- What zoning are you going for?
- Do you think there will be an enthusiastic take-up?
- One of the key messages you left off the list was 'go away'.

**Maree Tetlow: CEO Northern Tasmania Development**

Feedback she had heard was around the following

- Name
- Agriculture/vineyard: spray drifting back and therefore upsetting people
- Utilities

**Northern Tasmania issues**

Population: unless we act, the working population will dramatically drop off in the next three years. Strategy to encourage more skilled migration needed.

NBN: will need to look at how the new community connects to the web so people can work from there.

Housing strategy: being developed. Aim is for inclusion.

Economic data: developing an economic plan with the help of NIEIR (National Institute of Economic and Industry Research). Report will be available soon

NTD do not separate economic and social but focus on the two together.

Employment: focus on apprenticeships and employment

**Chris Griffin CEO Northern Tasmania Tourism**

Will need to be visitation around purpose – not something you come across

Artisan/makers has great appeal particularly around produce and agricultural activities

Agreed, something like the Mt Eliza Management Centre would be appealing

Incorporate facilities for 'electric cars' – visitors will only travel as far as they can on the 'daily battery' – will want to power up at the night when they are asleep

TNT focuses on the heritage precincts/villages in next few years

**Neil Grose, Launceston Chamber of Commerce**

Thanked us for the briefing

**Leanne Hurst and Richard Jamieson, Planning and Development, Launceston City Council**

Thanked us for the briefing

End report  
July 2018

the**noa**group





Our Ref: 8201824101 – Letter 001  
Contact: Nuno Moreira

Cardno (NSW/ACT) Pty Ltd  
ABN 95 001 145 035

15 September 2018

Level 1, 47 Burelli Street  
Wollongong NSW 2500  
Australia

**Traders in Purple**  
PO Box 1984  
Macquarie Centre  
NSW 2113 Australia

Phone: 61 2 4228 4133  
Fax: 61 2 4228 6811

Attention: Brett Robinson

[www.cardno.com.au](http://www.cardno.com.au)

Dear Brett,

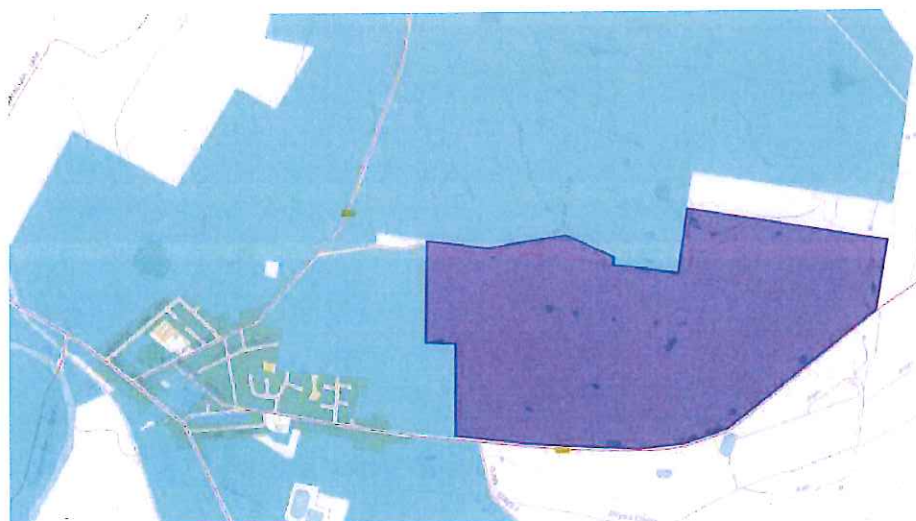
**PRELIMINARY UTILITIES ASSESSMENT FOR RIDGESIDE LANE, EVANDALE**

Cardno (NSW/ACT) Pty Ltd has been engaged by Traders in Purple to prepare a Preliminary Utilities Assessment to identify available utilities to service the proposed development of Ridgeside Lane, Evandale (the site).

**Potable Water**

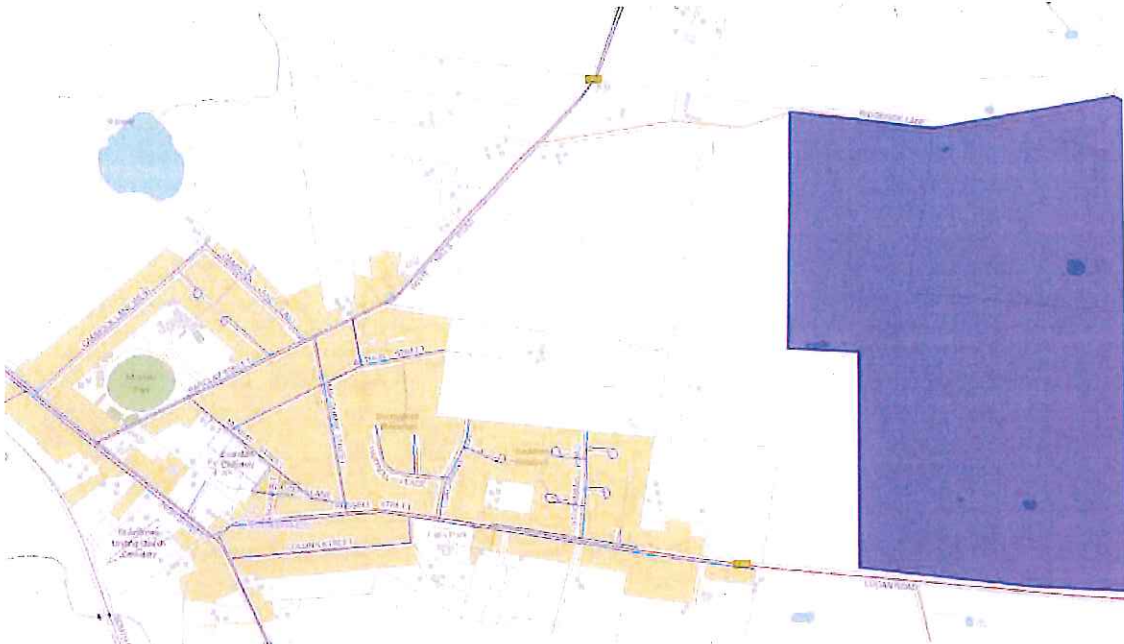
Evandale is part of the Longford System which takes water from the South Esk. The system is part of the Greater Launceston Water Supply Strategy work which is currently in progress.

The site is currently not serviced with potable water. The land that can be serviced by existing potable water infrastructure is shown as a light blue hatch in **Figure 1**.



**Figure 1 Potable Water Serviceable Land**

Existing potable water infrastructure is located along Logan Road (DN150) and White Hills Road (DN100) that is located in close proximity to the site as shown in **Figure 2**. It is expected that these assets will be extended to the development to service the site.

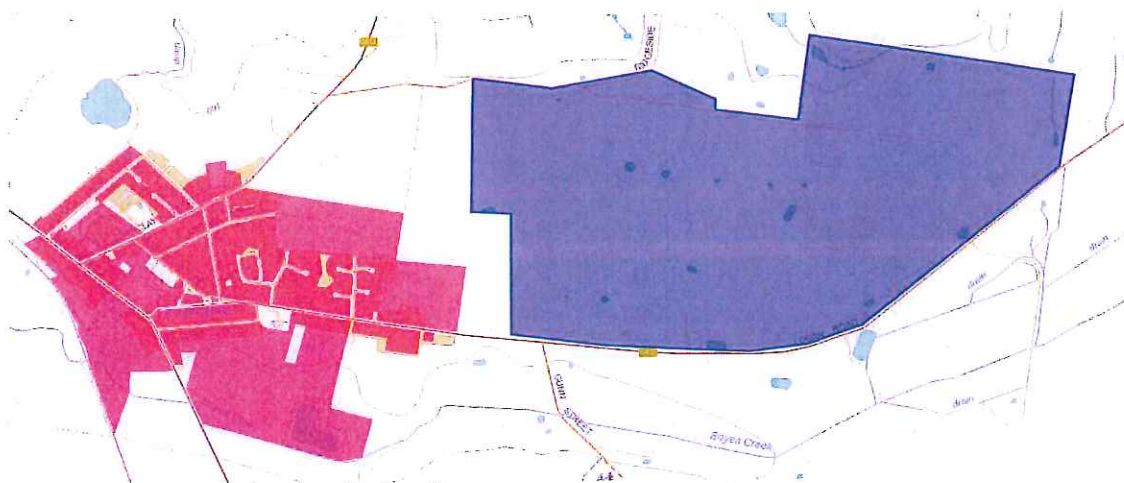


**Figure 2 Existing Potable Water Infrastructure**

There is approximately 2000 ET's of capacity at the reservoirs at Devon Hills that supply Evandale

#### **Waste Water**

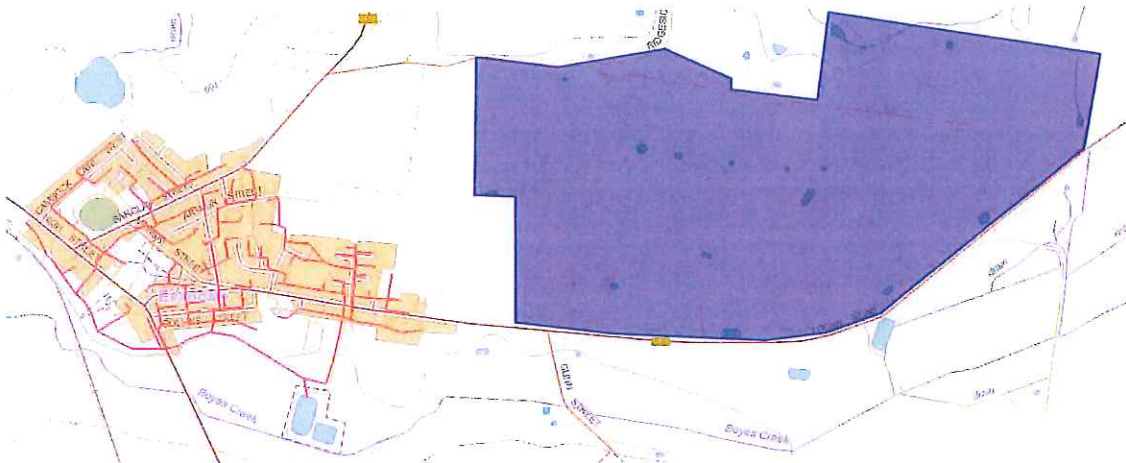
The site is currently not serviced for wastewater. The land that can be serviced by existing wastewater infrastructure is shown as a light pink hatch in **Figure 3**.



**Figure 3 Wastewater Serviceable Land**

Existing wastewater infrastructure is located along Logan Road (twin DN150 mains) that is located in close proximity to the site as shown in **Figure 4**. It is expected that these assets can be extended to the site to service the initial development.

The STP has a licence limit of 0.37ML/day, with current inflows averaging around 0.2ML/day. This is equivalent to 309 ET's of capacity remaining at the STP. The remaining sewage will need to be diverted to a new STP or upgrades to the existing STP will be required.

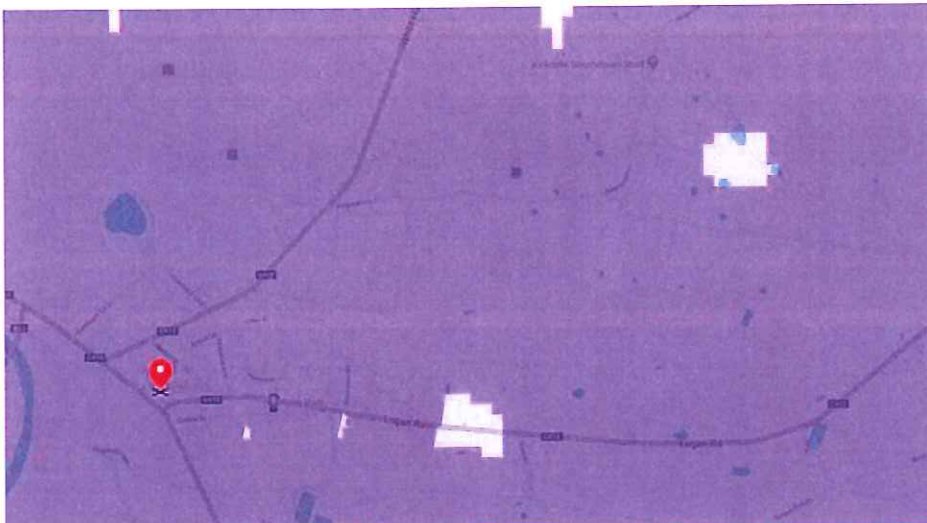


**Figure 4 Existing Wastewater Infrastructure**

#### NBN

The site is currently serviced by NBN. The land that can be serviced by existing NBN infrastructure is shown as a light purple hatch in **Figure 5**.

It is expected the development will be able to utilise the existing infrastructure for their development.



**Figure 5 NBN Ready Area**



**Electrical**

The site is currently not serviced by electrical infrastructure. The development will require the existing infrastructure to be extended to the development boundary. It is expected major network upgrades will be required to service the fully developed site.

**Gas**

The site is currently not serviced by any gas infrastructure. The nearest gas supply connection point is Longford or Franklin Village.

Yours sincerely,

**Nuno Moreira**  
*Civil Engineer*  
as authorised signatory for **Cardno (NSW/ACT) Pty Ltd**  
ABN 95 001 145 035

- Reviews requested by Northern Midlands Council
  - Agricultural review
  - Traffic Review
  - Preliminary Report on the Heritage Impacts of the proposed Ridgeside Lane subdivision on the township of Evandale



2/8/19

Paul Godier  
Northern Midlands Council  
PO Box 156  
Longford 7301

**RE: Ridgeside Lane Evandale – Proposed Planning Scheme Amendment – Review of Agricultural Assessment (additional information)**

Paul, this letter is to provide a review of the additional information provided by Macquarie Franklin in support of an application to allow a planning scheme amendment to rezone land at Ridgeside Lane Evandale from Rural Resource to a mix of Residential and Rural Residential.

Further information was prepared by Macquarie Franklin dated February and April 2019 and copies provided for review. The additional information provided in support of the application was in response to issues raised in my initial review and as I understand other issues raised by council and local residents.

The responses must be assessed in terms of the key principles of the protection of agricultural land policy (PAL) as raised in my initial review (principles 1, 7, and 8).

***Principle 1 - Agricultural land is a valuable resource and its use for the sustainable development of agriculture should not be unreasonably confined or restrained by non-agricultural use or development.***

The response documents still do not address the direct loss of agricultural land, this is a fundamental flaw as the proposal cannot comply with principle 1. The response documents simply try to justify the proposal by discussing buffer distances. An opinion is offered by the author (Jason Lynch) in regards an appropriate buffer distance of 70m in the initial document but not a single reference is offered in support of the opinion or the conclusions. In the second document a more in-depth discussion of setbacks to adjacent agricultural uses is provided, and the apparent buffer prescribed in the development has been increased to 200m. Again, the second document is lacking in references to support the setbacks and the justification provided. A simple search of publications within Australia including planning guidance documents from other states would provide relevant references, such as the NSW government publication *Buffer Zones to Reduce Land Use Conflict with Agriculture – An Interim Guideline* (NSW DPI November 2018) which lists appropriate buffer distances between residential developments and agriculture including 300m for cropping up to 1000m for cattle feed lots, pig farms or chicken farms. It is my conclusion that no actual research or modelling has gone into the buffer areas prescribed within the development and it cannot be demonstrated that the buffers would be adequate for a large-scale residential development surrounded on all sides by productive agricultural land. The land in question is open and relatively flat country with little natural vegetation or topography to disperse or absorb noise or spray drift, which can affect sensitive receptors at significant distances. In particular, the vineyard on the adjacent property (763 White Hill Road) has the potential to be significantly fettered by the development, as frost protection fans could be an essential part of vineyard management with significant potential for noise impacts within a 2km area. Likewise, existing cropping activities on adjacent properties have significant potential for spray drift and noise to create conflicts with the proposed residential use. Further development of irrigated dairy production, feedlots or other intensive livestock production on adjacent properties could also be seriously fettered or even prevented by the placement of a residential development in the area (The Environmental impacts and attenuation code in the Northern Midlands Planning scheme lists setback of 3km from residential land to a feedlot and 500m from a piggery or chicken farm – see table E11.1). It is my conclusion that the placement of a large-scale residential development on agricultural land within a declared irrigation district places an unreasonable constraint upon the land in question and the surrounding agricultural land.

***Principle 7 - The protection of non-prime agricultural land from conversion to non-agricultural use will be determined through consideration of the local and regional significance of that land for agricultural use.***

The response documents list the apparent areas of various land classes within a local and regional area, which defines the local area as the northern midlands (not Evandale) and the region as a combination of the greater Northern Midlands, Tamar, and Meander valley areas. I believe this is misleading, as the local area that the properties are situated in is clearly Evandale, and the region is clearly the Northern Midlands, not the Tamar Valley or the Meander Valley, which are separate municipalities, and very separate geographical regions. The response concludes that the land is small in area and is not a significant portion of class 4 land in the locality and the region. The response also concludes that the subject properties do not have a unique position in terms of their value and importance to agricultural land use activities. Simply because land does not make up a large portion of a certain land class, does not mean that land does not have intrinsic local or regional importance for agricultural use. If the logic was employed that it is acceptable to convert parcels of land labelled as small or not important then the land resource would face death by a thousand cuts. That is, parcels of land could continually be converted one by one in small pieces, such that eventually all of the agricultural land would be lost. The same principles of land capability must apply to all the land identified within the local area as having significance for agriculture, and in the Evandale area Class 4 land is the best class of land available for agricultural use. This makes the class 4 land of particular local significance as it is the most productive land available, and the land with the most potential for future agricultural development in the Evandale area.

There is no doubt that the land in question is valuable agricultural land and the fact the land is contained within a declared irrigation district makes the land even more significant. The land is capable of supporting a wide range of agricultural crops and intensive livestock enterprises, and existing nearby land use shows further agricultural development would be both economically and environmentally sustainable.

***8. Provision must be made for the appropriate protection of agricultural land within irrigation districts proclaimed under Part 9 of the Water Management Act 1999 and may be made for the protection of other areas that may benefit from broad-scale irrigation development.***

The response documents make no direct attempt to comply with this principle, and do not even attempt to present a valid argument for non-compliance. The first response talks about the tradeable nature of the water rights in the irrigation scheme, and that the water rights allocated to the properties would not be lost but could be traded by the proponent, no mention of the permanent loss of agricultural land within an irrigation district. Elsewhere in the second response the 40ML water right is described as a small amount of water, however a wide range of crops are assessed as suitable for the site, with a number of enterprises clearly offering good returns based upon current economics. As the water rights in the scheme are fully tradeable and the land quality is good the range of crops available now and into the future could be greatly expanded, as new markets, crops and technology is developed. An excellent example is the development of viticulture in Tasmania over the last 30 years, from a very small crop area to a major industry supported by irrigation development. The permanent conversion of the land to residential use will forever remove any of the future agricultural potential of the land, which is why land within a declared irrigation district must be protected.

It is my opinion that the response documents do not adequately address the State Policy on the Protection of Agricultural Land, and in particular principles 1, 7, & 8. The proposal would result in the permanent loss of agricultural land of local and regional agricultural significance within a declared irrigation district. It is therefore my conclusion that the proposal does not comply with the State Policy on the Protection of Agricultural Land and should not proceed.

Regards



Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD  
Director

# Buffer Zones to Reduce Land Use Conflict with Agriculture

## An Interim Guideline

November 2018, Primefact 1624, First edition

Dr Alexander Wells, Agricultural Land Use Planner, Grafton

### Introduction

This Interim Guideline (the Guideline) provides buffer zone advice to agricultural industries, development proponents and consent authorities so as to reduce land use conflict between agriculture and other land uses. Such conflict is becoming increasingly common as residential development encroaches towards agriculture, much of which has been in operation for many decades.

The terms 'Buffer Zone' and 'Separation Distance', are often used interchangeably within the planning framework. They are defined by the Environment Protection Authority (EPA) as:

**Buffer Zone** : An area of land set aside to minimise the impacts of land uses on each other.

**Separation Distance**: The distance between the point of generation of an environmental impact and a receptor that is sensitive to that impact.

A separation distance may be used to specify the width of a buffer zone.

A buffer zone is also generally accepted as being an area where a landholder has legal control of the land needed to separate their development from adjoining land.



Cucumber poly-tunnels next to a residential area. Mid North Coast NSW. Photo Alexander Wells



The aim of this Guideline is not to replace a formal Statement of Environmental Effects or Environmental Impact Statement (EIS) as required under existing planning instruments.

Nor is it intended to address biosecurity and environmental management risks, as these often vary to those employed to minimise land use conflict. Rather, it is intended to assist development proponents and consent authorities to build appropriate buffer zones into developments by suggesting a distance, within which, a development should be further evaluated for possible impacts

Other objectives of this Guideline are to assist in providing:

- a common understanding of the purpose of buffers and separation distances, adopt a consistent approach and apply these distances for assessment purposes;
- access to information on Best Practice Management and methods for determining appropriate buffers/separation distances;
- the incorporation of buffers into developments and the planning and approvals process (such as consent conditions).

This will minimise the risk of future land use conflict and the need for further regulatory intervention.

In NSW, there are currently a number of different approaches to guide separation distance decisions within the planning framework.

In the case of most new intensive animal developments, a formal Statement of Environmental Effects (the minimum assessment Councils require before granting consent) or full EIS, will be required.

This assessment will calculate a range of separation distances for reasons such as biosecurity, environmental protection or maintaining amenity for adjacent landholders and the public.

Some other agricultural enterprises such as horticulture and stock grazing, may not require such an assessment.

Non-agricultural developments such as new residential areas that are adjacent to existing agricultural activities, may also not require a formal assessment to determine separation distances. In these situations, building in buffers as indicated in this Guideline, will help minimise land use conflict.



Rural land in western Sydney scheduled for re-zoning. Photo Nearnmap image

## Why are buffers necessary?

The separation of land uses incompatible with agriculture and between different types of agriculture, can be an effective way to minimise land use conflict and enable primary producers to better operate, with fewer constraints. It also plays a key role in farm biosecurity and in managing any impacts of agriculture on the environment.

It is essential that any proposed agricultural development undertake a full biosecurity risk assessment using the latest industry Best Practice Management through a Statement of Environmental Effects or EIS.

Proponents should also contact the Office of Environment and Heritage, the Environment Protection Authority and the Biosecurity and Food Safety Division of the Department of Primary Industries, for advice on biosecurity and environmental buffers.

It is important that buffer zones built into the design of developments do not rely on any adjacent rural landholding for their development's buffer zones. This is particularly relevant for non-agricultural developments such as new residential developments which have in the past, often relied on adjoining rural zoned land to form part of the development's buffer zone.

Incorporating appropriate buffer zones into the planning process, particularly at the early stages of a proposed development, will provide ongoing benefits for primary producers and the public.



Intensive poultry operation in the central west of NSW showing extensive use of buffers and vegetation screening. Photo DPI

## Buffers & Land Use Conflict

There are a range of causes of land use conflict and it can threaten the ongoing viability of agricultural operations as well as the amenity enjoyed by adjacent land users.

Some of these causes include threats to biosecurity, odour, dust, noise, water use, visual amenity, smoke, effluent management, chemical use & spray drift, weed management, as well as other nuisance issues such as stray dogs and trespass.

The most offensive or difficult to control may also require the largest buffers from sensitive human receptors.

Sensitive human receptors include land uses such as private dwellings (not associated with the agricultural operation), schools, places of worship, public parks, workplaces etc.

Some intensive agriculture developments such as the poultry and pig production sectors have received significant community attention, often due to their proximity to non-agricultural land users. Increasingly, horticultural operations are also receiving this community scrutiny.

This is largely because residential development is expanding into areas that have long been used for primary production. Also, land that in the past was typically used for extensive agriculture such as cattle grazing, is now being used more intensively.

The NSW *Right to Farm Policy* was developed, partly in response to the increase in land use conflict that has now been documented through a number of surveys of local government.

'Right to Farm' is a broad concept centred on the idea that primary producers should be able to undertake their lawful activities in accordance with accepted industry standards, without undue interference. Since its inception in 2015, considerable progress has been made in its implementation. Consistent application of separation distances will also contribute to the implementation of the Policy.

### **Indicative buffers and separation distances**

To date, the most comprehensive publication containing buffer/separation distance recommendations is the *Living and Working in Rural Areas Handbook* (The Handbook).

The authors of the Handbook reviewed an extensive national and international literature and some of the suggested distances have been maintained in this Guideline.

In conjunction with the Handbook, a Land Use Conflict Risk Assessment (LUCRA) Guideline is also available to assist in identifying whether a buffer zone is required. Consent authorities can require a LUCRA as a condition of consent for some forms of development.

Since the Handbook was first published in 2007, some agricultural sectors have made changes to industry Best Practice Management with respect to buffers.

There are also a range of separation distances prescribed by various policies, legislation/regulations & industry sector guidelines. Relevant changes have been incorporated into this Guideline.

However it should be noted that this area is subject to constant change. For example, at the time of writing, a revised State Environment Planning Policy (Exempt and Complying Development Codes) 2008 has been released while a new Primary Production and Rural Development SEPP is being prepared.

These documents may prescribe separation distances although in some cases, such as the Codes SEPP above, prescribed distances are not recommended separation distances. Instead, if a development falls within the distance prescribed in the Codes SEPP, a different planning pathway must be adopted.

Another example of a prescribed distance that initiates further evaluation is Clause 21(4) of Schedule 3 of the Environmental Planning and Assessment Regulation 2000 (EP&A) Regulation. This requires that any intensive poultry development within 500m of a residential zone must be treated as a 'Designated Development'. The same 500m distance is also referenced in the *Best Practice Management for Meat Chicken Production in NSW – NSW DPI* (2012). Again, it is not a recommended distance but one that initiates the need for an EIS and so it can be thought of as an 'evaluation' distance.

The issues surrounding land use conflict and the separation of incompatible land uses through the establishment of buffer zones, is not an exact science. As such, the distances suggested in **Table 1** are intended to be used as a guide and an initiator for further evaluation. The use of these 'evaluation' distances by proponents will help reduce land use conflict by initiating an assessment as to what constitutes a satisfactory buffer zone.

Site specific considerations such as topography, vegetation, the nature of the adjacent agricultural operation(s) as well as the type of proposed development, should all be considered when undertaking any assessment to determine separation distances and buffer zones.

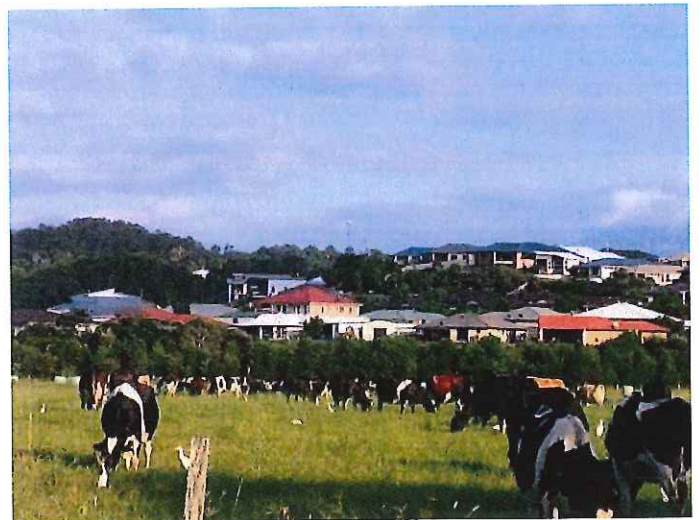
If the development requires consent under Part 4 of the *Environmental Planning and Assessment Act* (1979), a formal Statement of Environmental Effects or full EIS, will need to be undertaken.

Such an assessment will include consideration of the issues cited above and should use the latest industry sector Best Practice Management.

Separation distances will be quantified through this assessment, which will then form the basis of any buffers for sensitive human receptors, biosecurity and environmental management requirements.

It is possible, indeed likely, that a formal evaluation will stipulate different distances than indicated in **Table 1**. Therefore, these are the distances that should be applied to the development.

Striking the balance of the right of primary producers to undertake their lawful activities and maintaining community amenity, is essential to facilitating ongoing primary production and the economic and social benefits that flow from this.



A dairy farm adjacent to a housing estate. Far North Coast. Photo Selina Stillman

### **Case Study 1: Broiler Farm Odour Modelling**

An example of how separation distances can vary depending on site specific factors, is through a Broiler [chicken meat] Farm Odour Modelling (Level 1) exercise. Such an analysis would be required for any new broiler farm development.

One should also be completed when new residential developments are planned for locations near to existing broiler farms – an increasingly common occurrence in Western Sydney.

Standard EPA Level 1 odour modelling methodology was used as required by the *Best Practice Management for Meat Chicken Production in NSW – NSW DPI* (2012). A range of variables from a worst case to best case scenario were used, while assumptions included a 6 shed farm containing 35,000 birds per shed.

The results of this analysis show a range of recommended distances to sensitive receptors from 4333m for a worst case scenario, to 453m as a best case. However, using a typical range of variables, the recommended separation distance that resulted from this exercise, was 1079m. This correlates closely with the suggested evaluation distance in **Table 1**.

Another practical example of how this Guideline may be used, including the importance of formal assessments, is provided in the form of Case Study 2 (p8).

**Table 1: Suggested evaluation distances between agriculture and sensitive receptors**

Agricultural Land Use	Distance (meters)	Source
Pig Farms (indoor)	(1) 1000 <sup>a</sup> (2) 500	Living and Working in Rural Areas Handbook (2007) For facilities holding less than 200 pigs - Draft Standard Instrument LEP (2017)*
Pig Farms (outdoor)	500	National Environmental Guidelines for Outdoor Rotational Piggeries - Revised: Australian Pork Limited (2013)
Poultry (broiler & eggs) indoor and outdoor	(1) 1000 <sup>b</sup> (2) 500	Living and Working in Rural Areas Handbook (2007) and Level 1 Odour Modelling case study For facilities holding less than 1000 birds - Draft Standard Instrument LEP (2017)*
Dairies	500 <sup>c</sup>	Including for facilities holding less than 50 head - Draft Standard Instrument LEP (2017)*
Cattle Feedlots	1000 <sup>d</sup> 500	Living and Working in Rural Areas Handbook (2007) For facilities holding less than 50 head - Draft Standard Instrument LEP (2017)*
Sheep or goat Feedlots	500	Living and Working in Rural Areas Handbook (2007)
Rabbits	150 <sup>e</sup>	Rabbit Farming: Planning and Development Control Guideline: NSW DPI (2002)
Other intensive livestock	250	SEPP (Exempt and Complying Development Codes) 2008
Stock grazing	50	Living and Working in Rural Areas Handbook (2007)
Stock yards	200	SEPP (Exempt and Complying Development Codes) 2008 –Inland Code
Outdoor Cropping/sugar cane/turf farms	300	Living and Working in Rural Areas Handbook (2007)
Outdoor horticulture	250	SEPP (Exempt and Complying Development Codes) 2008
Protected cropping (greenhouses)	250	SEPP (Exempt and Complying Development Codes) 2008
Silos/grain storage bunkers	100	SEPP (Exempt and Complying Development Codes) 2008 –Inland Code
Fan assisted silos (Macadamia nuts)	300	Living and Working in Rural Areas Handbook (2007)

### Notes:

- At the time of writing, definitions within the Draft Standard Instrument LEP (2017) were being revised in conjunction with the drafting of the new Primary Production and Rural Development SEPP, so the distances provided may be subject to change when these are finalised.
- All intensive animal agriculture development applications that reach certain threshold levels as listed on Schedule 1 of the *Protection of the Environment Operations Act 1997* will require a licence from the EPA.

- All intensive animal agriculture development applications that reach certain threshold levels are deemed a Designated Development under Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* and require a full Environmental Impact Statement.
- All intensive animal agriculture proposals that are subject to an environmental assessment or an Environmental Impact Statement will require assessment using the latest industry sector BMPs (listed below) as well as in accordance with the *Assessment and management of Odour from Stationary Sources in NSW (2006)* and the *Noise Policy (2017)*.
  - a) Subject to environmental assessment in accordance with the Australian Pork Limited AUSTRALIAN PORK LIMITED National Environmental Guidelines for Indoor Piggeries (NEGIP) May 2018
  - b) Subject to environmental assessment in accordance with *Best Practice Management for Meat Chicken Production in NSW – NSW DPI (2012)*.
  - c) Subject to environmental assessment in accordance with *Environmental Management Guidelines for the Dairy Industry*. NSW DPI (2008) if the dairy can accommodate 50 head or more.
  - d) Subject to environmental assessment in accordance with the *National Guidelines for Beef Cattle Feedlots in Australia, 3<sup>rd</sup> edition*. Meat and Livestock Australia (2012)
  - e) Subject to environmental assessment in accordance with *Rabbit Farming: Planning and Development Control Guideline*. NSW DPI (2002).

## Case Study 2

A company owns two Lots of land zoned RU1 (Primary Production) comprising a total of 20 Hectares. They are planning to submit a Development Application to re-zone the land for a new, 280 dwelling, over 55s lifestyle community. The area has a long history of horticulture, stock grazing and dairy production and these activities continue to take place on adjacent, or nearby properties.

The property with one adjacent boundary has been used for low intensity cattle grazing for many years. Another adjacent property is being used for commercial horticulture including the use of greenhouses. The one remaining dairy in the area is located approximately 420 meters away.

The consultants working on the project considered nearby land uses and with reference to this Interim Guideline, made the following recommendations to their client:

1. Any of the proposed new dwellings adjacent to the property running cattle, should be set back at least 50 meters from the boundary of the property, with an access road and screening vegetation also forming part of the buffer.
2. Given that the proximity of the dairy fell within the minimum separation distance suggested in this Guideline, the consultants undertook an assessment of the possible impact of the dairy in terms of noise, dust and odour in accordance with industry Best Management Practice. The modelling showed that due to the topography, vegetation and siting of the proposed development, that the 420 meter separation distance was adequate in this instance.
3. The adjoining horticulture operation on approx. 50 Hectares, was using 20 greenhouses and outdoor cultivation to within approximately 10 meters of the boundary. This Guideline indicates a buffer of 250 meters between a new development and the boundary of adjoining land where horticulture is undertaken. This reduced the number of dwellings that the proponent was intending to construct by 10%. It also required a re-design of the facility so that the off leash dog exercise area, pool and tennis courts were located alongside that boundary with screening vegetation also used. This buffer enabled a final separation distance of 180 meters between the nearest dwelling and the boundary of the adjacent property undertaking horticulture.

Note that the assessment and modelling of the impact of the dairy did not consider biosecurity as the proposed development will not involve any form of agriculture.

## More Information

Right To Farm Policy and Land Use Survey

[www.dpi.nsw.gov.au/agriculture/lup/legislation-and-policy/right-to-farm-policy](http://www.dpi.nsw.gov.au/agriculture/lup/legislation-and-policy/right-to-farm-policy)

Living and Working in Rural Areas: A handbook for managing land use conflict issues on the NSW North Coast (NSW DPI, Dec. 2007).

[www.dpi.nsw.gov.au/research/alliances/centre-for-coastal-agricultural-landscapes/living-and-working-in-rural-areas](http://www.dpi.nsw.gov.au/research/alliances/centre-for-coastal-agricultural-landscapes/living-and-working-in-rural-areas)

Revised National Environmental Guidelines for Piggeries - Second Edition (2010)

[www.environment.gov.au/system/files/pages/c7dc0bcb-56b7-41c0-9c66-69618c7dcad7/files/cfi-national-environmental-guidelines-piggeries.pdf](http://www.environment.gov.au/system/files/pages/c7dc0bcb-56b7-41c0-9c66-69618c7dcad7/files/cfi-national-environmental-guidelines-piggeries.pdf)

National Environmental Guidelines for Outdoor Rotational Piggeries Revised: Australian Pork Limited (2013)

[australianpork.com.au/wp-content/uploads/2016/07/NGforOP\\_2013\\_22\\_lowres.pdf](http://australianpork.com.au/wp-content/uploads/2016/07/NGforOP_2013_22_lowres.pdf)

Best Practice Management for Meat Chicken Production in NSW – NSW DPI (2012).

[www.dpi.nsw.gov.au/animals-and-livestock/poultry-and-birds/poultry-planning-and-keeping/planning-for-poultry-development/bpm](http://www.dpi.nsw.gov.au/animals-and-livestock/poultry-and-birds/poultry-planning-and-keeping/planning-for-poultry-development/bpm)

Environmental Management Guidelines for the Dairy Industry. NSW DPI (2008)

[www.dairyingfortomorrow.com.au/wp-content/uploads/Environmental-management-guidelines-for-the-dairy-industryNSW.pdf](http://www.dairyingfortomorrow.com.au/wp-content/uploads/Environmental-management-guidelines-for-the-dairy-industryNSW.pdf)

National Guidelines for Beef Cattle Feedlots in Australia, 3rd edition. Meat and Livestock Australia (2012)

[www.mla.com.au/CustomControls/PaymentGateway/ViewFile.aspx?QcyEIgTQngTm70](http://www.mla.com.au/CustomControls/PaymentGateway/ViewFile.aspx?QcyEIgTQngTm70)

[Ea6OZR/MDZg3dm+mO3vWCcz9tYt1wX46/4IEqi/3wVtYwQ+L1k3EYMKKAfsht7d1Tnt3BqiA==](http://www.dpi.nsw.gov.au/animals-and-livestock/other-animals/rabbit-farming-planning)

Rabbit Farming: Planning and Development Control Guideline. NSW DPI (2002)

[www.dpi.nsw.gov.au/animals-and-livestock/other-animals/rabbit-farming-planning](http://www.dpi.nsw.gov.au/animals-and-livestock/other-animals/rabbit-farming-planning)

For updates go to

[www.dpi.nsw.gov.au/factsheets](http://www.dpi.nsw.gov.au/factsheets)

## Acknowledgements

A collaboration and review by the NSW Department of Primary Industries staff, Melissa Kahler, Andrew Docking, Andrew Scott, Liz Rogers, Lilian Parker, Wendy Goodburn & Byron Stein.

Your Reference number (PUB18/698)

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**Disclaimer:** The information contained in this publication is based on knowledge and understanding at the time of writing (January 2019). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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**Paul Godier**

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**From:** admin@midsontraffic.com.au  
**Sent:** Tuesday, 23 July 2019 2:06 PM  
**To:** Paul Godier  
**Subject:** RE: Review of Ridgeside Lane Traffic Impact Assessment

Hi Paul,

I have had a good review of the Pitt and Sherry report.

In general terms I am comfortable with the analysis with respect to network capacity and parking requirements. The traffic generation and SIDRA analysis appears to be acceptable (I have undertaken some confirmation of these results and they are fine).

The TIA does not go into any detail on the access arrangements – the normal requirements contained in the Planning Scheme such as E4.7.4 (sight distance). Whilst I accept that this is a high level assessment, I would have thought it would be important to understand that the access conditions were safe as well as efficient. I would recommend that all access designs be subject to approval in terms of design and condition that they must meet the SISD requirements contained in E4.7.4 of the Planning Scheme.

We discussed the potential loss of on-street parking in our meeting to cater for vehicle movements. It appears that this is not necessary now – or at least the TIA does not mention this. It does mention that road widening of Logan Road is required – this should be a condition of approval.

Please let me know if you require any further information from me.

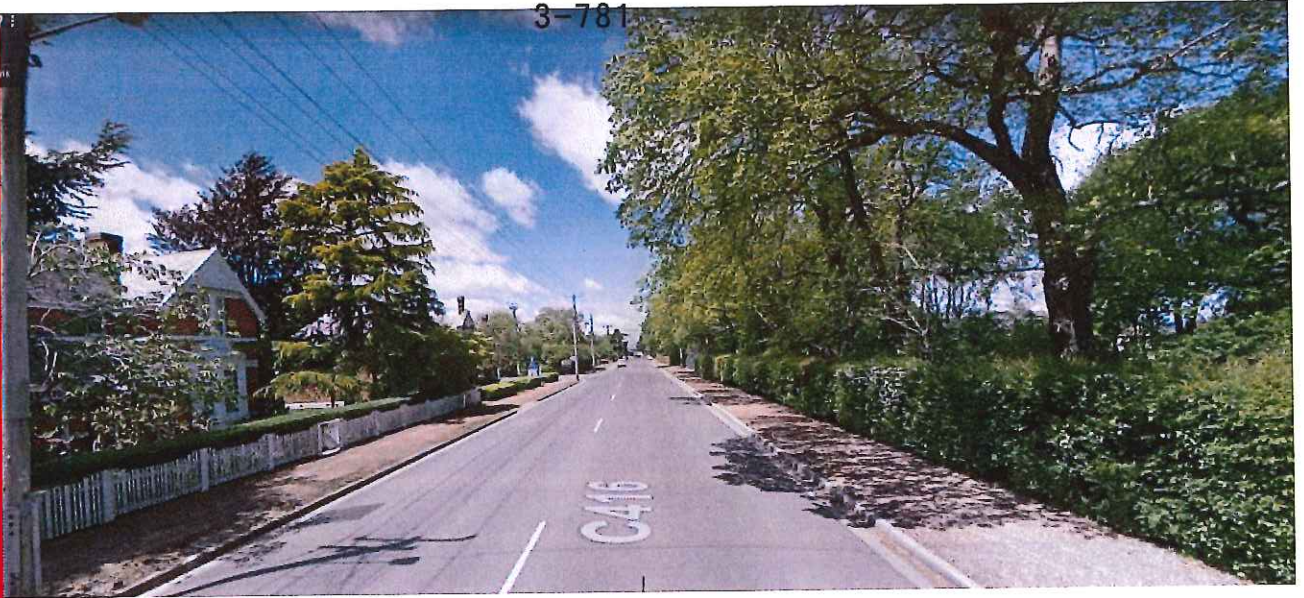
Kind regards,  
Keith

Keith Midson  
**Director**

**MIDSON Traffic Pty Ltd**  
traffic engineering | transport planning | road safety

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[www.midsontraffic.com.au](http://www.midsontraffic.com.au)





**Preliminary Report on the Heritage Impacts of the proposed Ridgeside Lane  
subdivision on the township of Evandale**

for Northern Midlands Council



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13.8.19

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1. Introduction
2. The Heritage Precinct of Evandale in the Northern Midlands Interim Planning Scheme 2013
3. Location of the site in relation to the Evandale Heritage Precinct
4. Existing Landscape and Visual Character
5. Visual Impact of the development on the town and approaches
6. Impact Issues

## 1 Introduction

The following report was commissioned by the Northern Midlands Council to provide a preliminary opinion on the impact of heritage values of the proposed Ridgeside Lane subdivision development on the township of Evandale. Northern Midlands Council made available a number of documents prepared for, or by the developer:

- *Evandale Subdivision Historic Heritage Assessment Report\_Cultural Heritage Management Australia\_1472018*
- *The Natural Values Report\_J.M.Lyall\_18.4.19*
- *Ridgeside Lane Concept Master Plan\_Traders in Purple-Lange Design\_27.4.19 Issue H*

SSLA undertook a field visit, which included examining the approaches to the site from each direction, the roads encircling the site and proposed for within the site itself, roads traversing the higher country to the NE of the site, and aspects of the site in relation to the township edge.

In addition, SSLA met with the developer's Landscape Architect to discuss the objectives of the proposal.

The following report summarises the observations made during that visit, and considers the visual amenity implications of the Northern Midlands Interim Planning Scheme 2013.

The objective is to provide an assessment of the impact on Evandale's heritage values of the development proposal as described in the Concept Master Plan. It includes some general observations as to design and amenity elements of non-heritage parts of the town which augment or detract from its rural and historic character.

This report does not provide detailed recommendations as to the landscape design of the development.

## 2 The Heritage Precinct of Evandale in the Northern Midlands Interim Planning Scheme 2013

The Planning Scheme specifically identifies heritage values in a number of towns within the municipality and in the case of Evandale summarises those values in the following statement:

### 1 EVANDALE HERITAGE PRECINCT CHARACTER STATEMENT

The Evandale Heritage Precinct is unique because it is the core of an intact nineteenth century townscape, with its rich and significant built fabric and village atmosphere. Its historic charm, tree lined streets and quiet rural setting all contribute to its unique character. Its traditional buildings are an impressive mix of nineteenth and early twentieth century architectural styles while its prominent elements are its significant trees, the Water Tower and the Church spires. The original street pattern is an important setting for the Precinct, with views along traditional streetscapes, creating an historic village atmosphere that is still largely intact. Period residential buildings, significant trees, picket fences, hedgerows and cottage gardens are all complementary, contributing to the ambience of a nineteenth century village. **The main roads into and out of Evandale create elevated views to the surrounding countryside which give context to the town and the Precinct, and contribute to its character.**

The quiet village feel of the town is complemented by a mix of businesses meeting local needs, tourism and historic interpretation. Evandale's heritage ambience has been acknowledged, embraced and built on by many of those who live in or visit the village

REF: Page E. 13-11

While the town encompasses areas of more recent development, these are outside the heritage precinct and transitions between the central precinct, these areas, and the rural landscape beyond generally reinforce a sensitive approach to protecting visual landscape values.

At present, the landform within and around the town enhances the management of these transitions – the central precinct is somewhat elevated compared to the immediate surrounds (including the site in question), occupying a relatively level and self-contained zone, and for the most part provides little prospect over the surrounding countryside or even of the more modern developments already established adjacent to the heritage precinct.

### 3 Location of the site in relation to the Evandale Heritage Precinct

The proposed development site commences 350M from the junction of Ridgeside Lane and White Hills Rd. This will be the main vehicular access for the majority of traffic, most likely carried along White Hills Rd and Barclay St. Barclay St has a mix of 19<sup>th</sup> to early 21st century dwellings in the Urban Growth zone, and on the approach to High St in the heritage precinct passes the town oval, community centre and the original school. The buildings, garden edges, walls, and existing mature trees at the junction of High St and Barclay Rd are integral to the experience of arrival in the town from the north. Any changes to either road through widening, reducing pedestrian paths providing traffic lights or roundabouts would have very high detrimental effect on this experience and should be considered with great care.



Fig 1 – High Street near Barclay St intersection

The southern boundary of the proposed subdivision bordering Logan Road, is approximately 240m east beyond the Urban Growth Boundary. At this point Logan Road morphs from suburban street, with kerb and gutter both sides, wide nature strips, street trees, concrete pedestrian paths, occasional fencing, and sporadic dominant trees and shrubbery within property boundaries to gently rolling grazing paddocks edged with a native tree hedgerow. It is proposed that 17 larger lots (2-2.6 hectares) will have independent access onto Logan Road and Russell St. The Heritage zoning commences approximately 1km from the proposed subdivision.

Refer Fig. 5:

#### 4 Existing Landscape and Visual character

Relevant to the consideration of the protection of the Heritage Precinct from visual impact by this (and any other development) is an acknowledgement that even in the transition zone between heritage and rural landscape, (where twentieth century residential and mixed used development already exists) there is a character which evokes the feeling of a 'small rural town'. Narrower streets and roads, some gravel paths, a mix of lot size, setback, tall, large trees within lots, fence type and hedges, dwelling construction and modest scale of construction combine to reinforce that feeling. Without this character, the transition from country to heritage precinct might be more abrupt and appear somewhat contrived. It will be important to ensure that development of the access along Ridgeside Lane responds to some of these treatments

Some of the most recent subdivisions towards the east along and off Logan Rd, Cambook Lanes East and West have not implemented the above techniques to attempt to retain the country town feel and a more suburban environs results with a predominance of concrete kerbs and paths, minimal fences, similar block size, and homogenous building stock, and little to no large trees in lots except for the occasional surviving street trees .

At the same time, the rural landscape beyond the town currently is relatively open, undulating and pastoral – this is the countryside within which the 19<sup>th</sup> century village is set – relatively isolated. Introducing a broadscale, medium density development into this setting will inevitably alter some aspects of the experience of visiting the historic township.

Extension of the developed zone – in this case to the east of the township- extends the transition to rural and may provide a precedent for similar extension of new development in other directions – eg in either direction along Evandale and Nile Roads, and to the NE along White Hills Road towards Relbia.

The scenic landscape management area extending 1.5km north of the heritage precinct along Evandale Road beyond the water tower provides a different landscape treatment to that within the town: 'new' post and rail fences, kerbed roads, manicured grass, hedges and street trees. **Fig 2** – Plates 1 and 2.

**Existing characteristics of the landscape:**  
Country road, no kerb and gutter, remnant native and exotic trees, hedgerows, views across open farmland, farm fences, views to the town on the hill

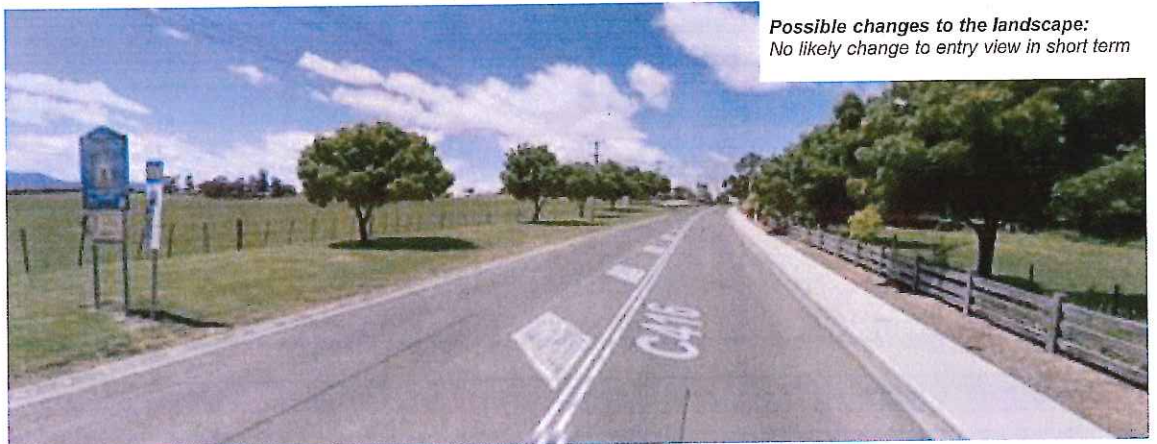
**Possible changes to the landscape:**  
*No likely change to entry view in short term*



**Plate 1** Southern approach to Evandale along Nile Road - within the Scenic Management Area

**Existing characteristics of the landscape:**  
Formalised road with kerb and gutter, concrete path and gravel verges, exotic street tree planting, mowed grass, hedgerows, views across grazing country, farm fences and 'new' post and rail fence views to an interesting structure on the hill - the historic water tower

**Possible changes to the landscape:**  
*No likely change to entry view in short term*



**Plate 2** Northern approach to Evandale along Evandale Road - within the Scenic Management Area

Refer Fig 6 for view locations

**Fig 2 - Main Roads to Evandale**



**Existing characteristics of the landscape:**  
Narrow road, kerb and gutter due to recent subdivision?, remnant native / planted trees, views across open farmland, farm fences

**Possible Changes to the Landscape**  
*Road will be widened, kerb and guttered, formalised concrete? path This part will become more suburban*



**Plate 3** Approach to Evandale from along White Hills Road

**Existing characteristics of the landscape:**  
View to water tower, simple narrow road, no kerb and gutter, conifers, informal road side, views beyond to a mix of housing styles, tall deciduous trees, hedgerows.

**Possible Changes to the Landscape**  
*Road will be widened, possibly made straighter, which may cause faster travel. The charm of this entry to the town may be lessened.*



**Plate 4** Approach to Evandale from along White Hills Road at Water Tower

Refer Fig 6 for view locations

**Fig 3 - Roads to Evandale**

## 5 Visual Impact on the Town and Approaches

With respect to the proposed development there will be no direct visual impact on the viewscape from within the historic precinct of the town, nor on Russell Street until it becomes Logan Road beyond Stockmans Road. Some of the development will be visible from the end of Arthur Street, and along White Hills Road.

The nature of the impact will largely depend on its design and implementation. Referring to the concept master plan, the location of larger built elements, road alignments, tree plantings and services (especially street lighting) will all contribute to the visual effect – either favourably or otherwise, and dependent on their location within the extensive site. An analysis of these impacts on the viewscape is probably premature at this stage, but finalisation of the concept must acknowledge the importance of distant views on visual amenity from the town and road approaches.

There is a defined scenic landscape management area along Nile Road, extending from Evandale Heritage precinct to the south. The development will not be visible from this road due to the distance (>1.4km) and the existing and proposed vegetation belts on either side of Logan Road.

Similarly the proposed subdivision will not be visible from the northern approach on Evandale Rd because of the adjacent landform. Refer **Fig 2-Plate 2**



**Existing characteristics of the landscape:**  
 Most eastern edge of existing Urban Growth Boundary. Road narrows and Kerb and gutter continues on one side only, some native trees, hedgerows, views across open farmland and the hills beyond

**Possible changes to the landscape:**  
 Road may be widened and sealed, kerb and gutter may be extended if required from council. New tree and shrub plantings along extent of subdivision boundaries.

**Plate 5** Approach to the proposed subdivision from Logan Road (site on left)



**Existing characteristics of the landscape:**  
 Narrow lane, remnant native trees along farm boundary, hedgerows, views across open farmland and the hills beyond

**Possible changes to the landscape:**  
 Road will be widened, sealed, and kerb and guttered. New fences, trees and shrub plantings.

**Plate 6** Approach to proposed subdivision from Ridgeside Lane (site on right)



**Plate 7** Approach to proposed subdivision site along Ridgeside Lane (site on right)

**Fig 4 - Views along town roads to proposed Subdivision**

Refer Fig 6 for view locations

## 6 Impact Issues

To summarise the issues likely to impact on the heritage values of Evandale (as defined in the planning scheme), its setting and location within the rural landscape, and the implications of the development on the wider viewscape we would make the following points – in no particular order of priority:

Development of Ridgeside Lane and White Hills Road should, respond to 'country town' character with respect to width, verge and footpath design, fencing and services, kerb and pavement finishes and requirements for trees to be planted within the property . Refer **Fig 3** – Plates 3 & 4, . Refer **Fig 4** - Plates 6 & 7

If the Barclay St/High St intersection becomes a primary traffic management junction it will be essential to contain traffic engineering to protect the highly significant heritage values of this part of Evandale Rd. Refer **Fig 1**

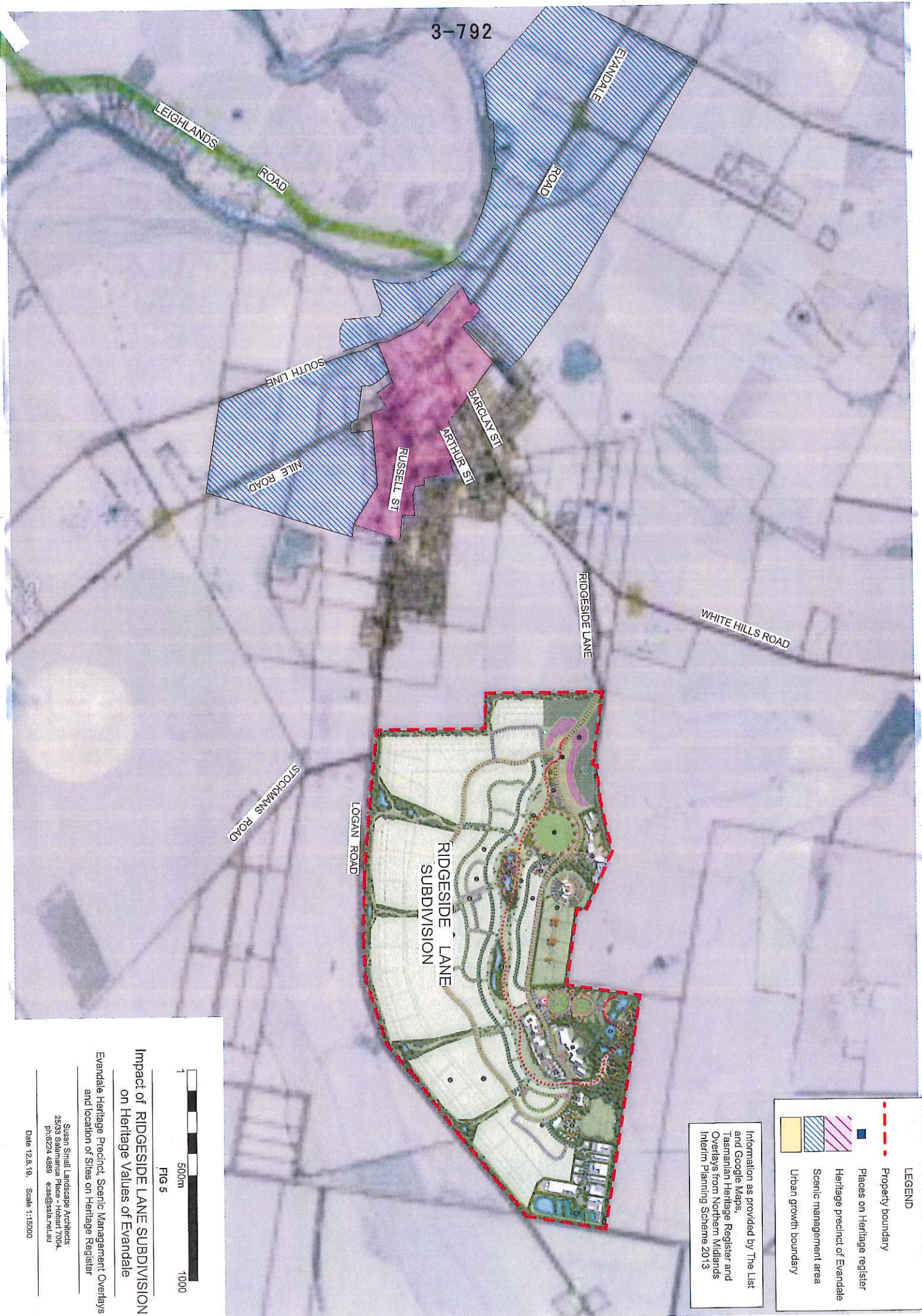
Regarding the boundary to the development along Logan Road – visual amenity should have a high priority including minimising the impact of entrance and fencing design, the proposed vegetation screen, maximum building heights and colours . . Refer **Fig 4** - Plate 5

Longer term planning for traffic management relating to the Midlands Highway and the South Esk floodplain should be considered in relation to the overall development and any likely subsequent developments of scale on all approaches to the town.

Attention should be given to the scale of larger built elements on the site, their location and siting, height, finishes and treatment of curtilage. The fact that the site is overlooked from parts of Evandale and the approach roads will tend to magnify the prominence of buildings and roads.

Likewise street, amenity and pedestrian lighting should be designed to minimise light pollution and visibility from outside the site. The developer includes extensive plantings throughout the site in concept. The design (species selection, rate of establishment, scale, longevity and colour) will have considerable effect on aspects of visual amenity both within and from around the development.

Further to the last point, the intent to surround the site with a barrier of vegetation will be helpful in ultimately screening much of the development from ground level view, but it might also tend to create a 'gated', or 'walled garden' impression of the development – it may be important to finesse the design of the vegetation screen to mitigate this in some way.



3-792

**LEGEND**

- Property boundary
- Places on Heritage register
- Heritage precinct of Evandale
- Scenic management area
- Urban growth boundary

Information as provided by The List and Google Maps, Tasmanian Heritage Register and Overlays from Northern Midlands Interim Planning Scheme 2013



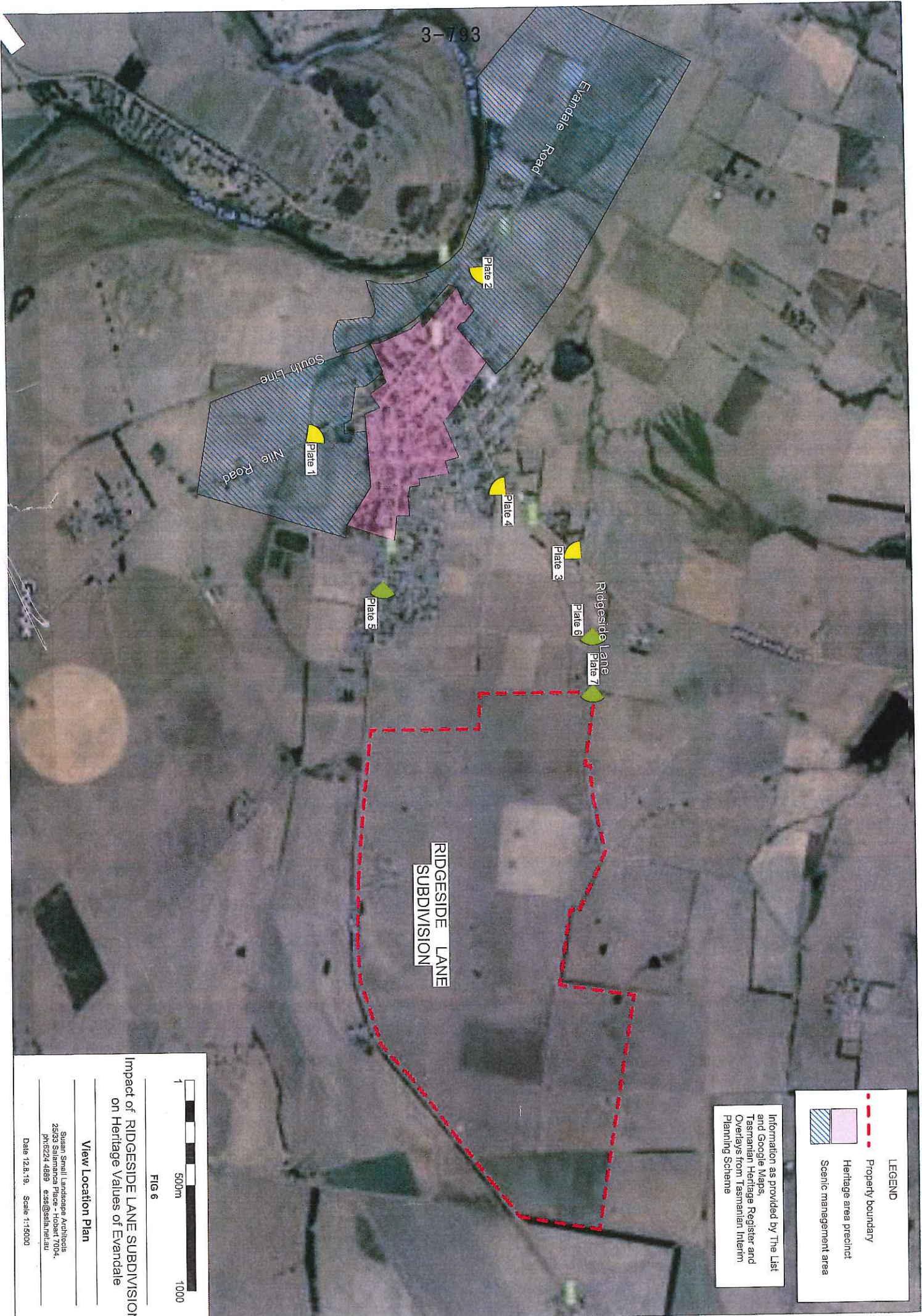
FIG 5

**Impact of RIDGESIDE LANE SUBDIVISION on Heritage Values of Evandale**

Evandale Heritage Precinct, Scenic Management Overlays and location of Sites on Heritage Register

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Date 12.8.19, Scale 1:15000



**LEGEND**

-  Property boundary
-  Heritage area precinct
-  Scenic management area

Information as provided by The List and Google Maps, Tasmanian Heritage Register and Overlays from Tasmanian Interim Planning Scheme



FIG 6

**Impact of RIDGESIDE LANE SUBDIVISION on Heritage Values of Evandale**

**View Location Plan**

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