

Council

MOUNT BARKER MEMORIAL SWIMMING POOL –
RECREATION ADVISORY COMMITTEE
RECOMMENDATION - ENDORSEMENT

Minutes – Recreation Advisory Committee
14Nov2019

Concept Development Options and Cost Estimates

Meeting Date: 3 December 2019

Number of Pages : 31



RECREATION ADVISORY COMMITTEE

MINUTES

Section 5.9(2)(a) LGA 1995

Committee Brief

The role of the Committee is to:

- *Oversee and make recommendation to the Council regarding the implementation of special projects that align with the Shire of Plantagenet Strategic Community Plan.*
- *Liase as necessary with community groups Recreation Centre Advisory Group, the Department of Sport and Recreation and other bodies; and*
- *To advise the Council on the strategic direction of recreation throughout Plantagenet.*

A meeting of the Recreation Advisory Committee was held at the
Shire of Plantagenet Committee Room, Mount Barker
14 November, 2019 at 3.00pm.

DAVID LYNCH
ACTING CHIEF EXECUTIVE OFFICER

Committee Members

Cr C Pavlovich, Cr B Bell, Cr J Moir and Cr K Woltering. (Deputy Cr S Etherington) - (Resolution No. 207/19).

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MEMBERSHIP

Cr C Pavlovich

Cr B Bell

Cr J Moir

Cr K Woltering

Cr S Etherington (deputy)

1 DECLARATION OF OPENING / ANNOUNCEMENT OF VISITORS

The Executive Manager Strategic Development, Mr Budrikis declared the meeting open at 3.00pm.

2 ELECTION OF PRESIDING MEMBER

Nominations were called for the position of Presiding Member. Cr Pavlovich was nominated for the position and declared elected unopposed.

3 RECORD OF ATTENDANCE / APOLOGIES

Attendees

Cr C Pavlovich
Cr B Bell
Cr J Moir
Cr K Woltering

Observers

Cr S Etherington (deputy)

Officers

Mr R Stewart
Mr A Budrikis

4 CONFIRMATION OF MINUTES

Moved: Cr B Bell, Seconded: Cr J Moir;

That the Minutes of the Meeting of the Recreation Advisory Committee held on 20 September 2019 as circulated, be taken as read and adopted as a correct record.

CARRIED

5 DISCLOSURES OF INTEREST

Nil.

6 MOUNT BARKER MEMORIAL SWIMMING POOL – FEASIBILITY STUDY

The Executive Manager Strategic Development addressed the Committee with regard to progress of the Mount Barker Memorial Swimming Pool Feasibility Study.

He noted that Great Southern Consulting had completed the Needs Assessment Report (October 2019). The nominated five options for further concept planning were:

1. Refurbish existing pool;
2. New 50m pool x six lane adjacent to the current facility;
3. New 25m x eight lane pool and learn to swim pool adjacent to the current facility;
4. Relocate pool and supporting infrastructure to the Sounness Park Sports Precinct: and
5. Do nothing.

Concept plans had been prepared by Roberts Gardiner Architects and costs for each prepared by Chris O'Keefe Construction Cost Consultant (attached). A discussion of the options was held with the following points made:

- The preliminary structural findings for the existing pool concrete bowl were favourable. The full test results and engineers report was not yet available;
 - It was noted that the community would prefer not to lose a swim season;
 - It was noted that a longer swim season would be preferred by the swim club and other members of the community;
 - It was also noted that in the survey 40% of respondents wished the pool to remain a 50m pool;
 - The change rooms, buildings and seating facilities were poor;
 - The learn to swim (LTS) pool for the 50m pool options (one and two) would not be as big as the LTS proposed for the 25m pool option three. This LTS pool would have at least three 25 m swim lanes at a constant depth of under 1m;
 - The LTS pool shown in option one would be better located to the east or south east corner;
 - The proposals include space for future developments such as a gym room, café and hydrotherapy pool;
 - It was noted that 60% of those surveyed believed a hydrotherapy pool was desirable;
 - It was noted the swimming club wished to have a club room;
-

- A number of members sited the Wagin pool development as a good model to follow (note pool refurb and learn to swim cost \$2.2m);
- The entrance would be better from the south with observation from the entry/ kiosk elevated and looking towards the north (not into the setting sun);
- Mead Street could accommodate 45 degree angle parking on the north side with road modifications; and
- In the first instance the Shire should aim to build the complete project, The ability to achieve this would depend on funds raised.

Moved: Cr J Moir, Seconded: Cr B Bell

That it be a recommendation to the Council that:

- 1. Option One based on the retention of the existing 50 metre pool be authorised for further development in conjunction with the consultant;**
- 2. The inclusion of a learn to swim pool be incorporated into the planning, the exact site of such pool to be determined;**
- 3. Future clubrooms, gymnasium, cafe, hydro-therapy pool and parking options also be incorporated;**
- 4. Funding options be investigated; and**
- 5. A further report be prepared for consideration by April 2020.**

CARRIED

It was also noted that the consultant should be advised that in investigating further option one the following be taken into account:

1. The entrance may be relocated to the south end;
2. Refer to the Wagin pool development;
3. Elevate the administration/ kiosk areas to enhance observation of the pool deck;
4. Consider all parking options; and
5. Consider staging options so as to minimise the closing of the pool.

7 FROST PARK

Councillors noted that any developments on Frost Park should be first reviewed and agreed by the Frost Park User Group. It was noted that the Frost Park User Group MOU was being reviewed.

Moved: Cr J Moir, Seconded: Cr B Bell

That Cr Pavlovich be a representative of the Recreation Advisory Group on the Frost Park User Group.

CARRIED

8 SOUNNESS PARK

The proposed equipment policy was further discussed. The proposal as it stood was considered to include too many variables. The draft policy is to be re-drafted.

9 YOUTH PRECINCT

Councillors discussed the need to fund a Youth Precinct and that a priority should be placed on planning this project after the swimming pool feasibility study is completed. It was noted that the Bremer Bay Youth Precinct was a good example of such a facility.

10 REGIONAL TRAILS

It was noted that the Great Southern Centre for Outdoor Recreation Excellence (GSCORE) Draft Regional Trails Masterplan should be available for public comment within a few weeks.

11 PLAYGROUND STRATEGY

Rob Stewart informed the committee that he had authorised the construction of a small fence around the west end of the Wilson Park playground "tunnel".

It was also noted that the Shire had not yet developed a playground strategy.

12 NEXT MEETING

TBA.

13 MEETING CLOSURE

5:20pm The Presiding Member declared the meeting closed.

CONFIRMED: PRESIDING MEMBER _____ DATE: _____



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REV	date	description
A	1-11-2019	ISSUED FOR REVIEW
B	5-11-2019	ISSUED FOR REVIEW
C	6-11-2019	ISSUED FOR REVIEW

p.o. box 1502, albury, western australia 6331
 telephone: (08) 9841 5455
 email: admin@rgarchitects.com.au

Roberts Gardiner
Architects

project
Mount Barker Memorial Pool
 Feasibility Study - Option 1
 client
 Shire of Plantagenet

Schematic Design

-

cad file MT BARKER POOL A01.DWG

drawn SG project number -

scale 1:500

date 06-11-19

dwg no. rev.

A-01 C



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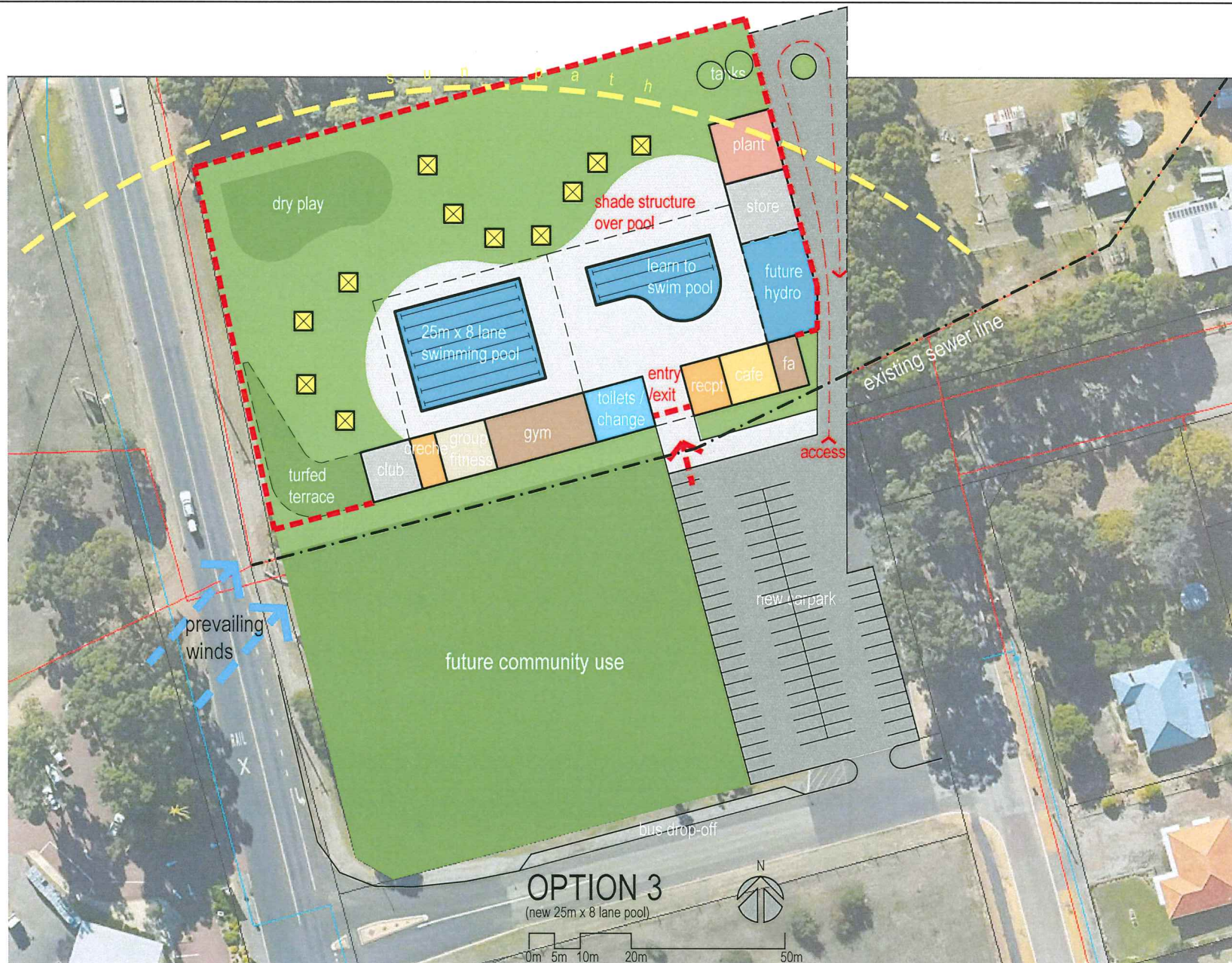
p.o. box 1502, albury, western australia 6331
 telephone: (08) 9841 5455
 email: admin@rgarchitects.com.au

Roberts Gardiner
Architects

project
Mount Barker Memorial Pool
 Feasibility Study - Option 2
 client
 Shire of Plantagenet

Schematic Design
 -
 cad file MT BARKER POOL A01.DWG
 drawn SG project number -

scale 1:500
 date 06-11-19
 dwg no. rev.
A-02 C



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B	5-11-2019	ISSUED FOR REVIEW
C	6-11-2019	ISSUED FOR REVIEW

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Roberts Gardiner
Architects

project
Mount Barker Memorial Pool
 Feasibility Study - Option 3
 client
 Shire of Plantagenet

Schematic Design

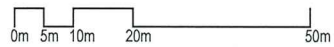
cad file MT BARKER POOL A01.DWG
 drawn SG project number -

scale 1:500
 date 06-11-19

dwg no. rev.
A-03 C



OPTION 4
(indicative layout)



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rev	date	description
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B	5-11-2019	ISSUED FOR REVIEW
C	6-11-2019	ISSUED FOR REVIEW

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project
Mount Barker Memorial Pool
 Feasibility Study - Option 4 (Souness Park)
 client
 Shire of Plantagenet

Schematic Design

drawn SG project number -

scale NTS
 date 06-11-19

dwg no. rev.
A-04 C

INDICATIVE COST ESTIMATE

MOUNT BARKER MEMORIAL POOL FEASIBILITY STUDY - OPTION 1

ROBERTS GARDINER ARCHITECTS

CHRIS OKEEFE CONSTRUCTION COST CONSULTANT

Nov-19

**MOUNT BARKER MEMORIAL POOL
FEASIBILITY STUDY - OPTION 1**

Ref : A1055

INDICATIVE COST ESTIMATE

11/11/2019

PROJECT COST SUMMARY

Total Cost from Summary	\$ 5,743,000
Design/ Contract Contingency (15 %)	\$ 861,450
Professional Fees (10%)	\$ 574,300
Subtotal	\$ 7,178,750
GST	\$ 717,875
TOTAL INDICATIVE COST ESTIMATE	\$ 7,896,625

Exclusions :

Cost escalation to date of tender
Loose furniture & equipment - Gym & Clubrooms
Upgrade of existing services
Unknown ground conditions
Shade Structures - Main & Learn to Swim Pool

Full Estimate Summary

Job Name : AI055 MTB POOL 1
 Client's Name: Shire of Plantagenet

Job Description
 MOUNT BARKER MEMORIAL POOL
 FEASABILITY STUDY - OPTION 1

Trd No.	Trade Description	Trade %	Cost/m2	Sub Total	Mark Up %	Trade Total
	Demolition	1.77		101,700		101,700
	Site Works	11.74		674,000		674,000
	Site Services	2.28		130,800		130,800
	Building Works	38.50		2,211,150		2,211,150
	Main Pool Works	21.68		1,245,350		1,245,350
	Learn To Swim Pool Works	7.75		445,000		445,000
	Hydrotherapy Pool Works	14.10		810,000		810,000
	Water Play Infastructure	0.87		50,000		50,000
	Playground Structure	1.31		75,000		75,000
		100.00		5,743,000		5,743,000

Final Total : \$ 5,743,000

Trade Breakup

Job Name : A1055 MTB POOL 1

Job Description

Client's Name: Shire of Plantagenet

MOUNT BARKER MEMORIAL POOL
FEASABILITY STUDY - OPTION 1

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 1 <u>Demolition</u></i>						
1	Break up & remove existing toddler pool structure & associated items	1.00	No	10,000.00		10,000.00
2	Take up & remove existing sunshade structures	2.00	No	1,500.00		3,000.00
3	Take up & remove existing sunshade umbrellas	2.00	No	250.00		500.00
4	Demolish existing pool building including plant structure	225.00	m2	250.00		56,250.00
5	Break up & remove existing paving	528.00	m2	35.00		18,480.00
6	Take down & remove existing perimeter fence	340.00	m	15.00		5,100.00
7	Preliminaries		Item			8,370.00
<u>Demolition</u>						Total : 101,700.00
<i>Trade : 2 <u>Site Works</u></i>						
1	Site strip	4,825.00	m2	1.00		4,825.00
2	Bulk excavation & stockpile	1,448.00	m3	20.00		28,960.00
3	Bulk filling	5,560.00	m3	30.00		166,800.00
4	Subsoil drain	180.00	m	75.00		13,500.00
5	Carpark including kerbing, carbay marking, signage & stormwater drainage	1,560.00	m2	75.00		117,000.00
6	Concrete paving	2,075.00	m2	80.00		166,000.00
7	Perimeter fence	250.00	m	150.00		37,500.00
8	Extra over double gate with access controls	1.00	No	5,000.00		5,000.00
9	Turf including reticulation	3,150.00	m2	25.00		78,750.00
10	Preliminaries		Item			55,665.00
<u>Site Works</u>						Total : 674,000.00
<i>Trade : 3 <u>Site Services</u></i>						
1	Allowance for power/lighting upgrade		Item			120,000.00
2	Preliminaries		Item			10,800.00
<u>Site Services</u>						Total : 130,800.00
<i>Trade : 4 <u>Building Works</u></i>						
1	Plant/Store	203.00	m2	1,000.00		203,000.00
2	Reception/Cafe	330.00	m2	2,000.00		660,000.00

Trade Breakup

Job Name : <u>A1055 MTB POOL 1</u>	Job Description
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 1

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 4 <u>Building Works</u></i> <i>(Continued)</i>						
3	Office/Cafe Fitout		Item			150,000.00
4	Toilets/Change	113.00	m2	3,000.00		339,000.00
5	Club/Creche/Fitness/Gym	450.00	m2	1,750.00		787,500.00
6	Main shade structure - Turfed Area	119.00	m2	350.00		41,650.00
7	Umbrella shade structures	12.00	No	2,500.00		30,000.00
<u>Building Works</u>						Total : 2,211,150.00
<i>Trade : 5 <u>Main Pool Works</u></i>						
<u>Refurbish Existing 50m x 6 Lane Pool</u>						
1	Empty pool		Item			2,000.00
2	Hack off remove existing tiling/render including scabbling	950.00	m2	25.00		23,750.00
3	Take out & remove existing channel drain & plumbing	50.00	m	100.00		5,000.00
4	Recaulking & repairs	174.00	m	75.00		13,050.00
5	New channel drain	50.00	m	350.00		17,500.00
6	Tiling including w/proof membrane	949.00	m2	450.00		427,050.00
7	Extra for lane tiling	300.00	m	50.00		15,000.00
8	Tanks & plumbing		Item			150,000.00
9	Plant		Item			350,000.00
10	Solar matting tube pool heating		Item			140,000.00
11	Pool Cover, lane ropes, starting blocks, etc		Item			100,000.00
12	Refill pool		Item			2,000.00
<u>Main Pool Works</u>						Total : 1,245,350.00
<i>Trade : 6 <u>Learn To Swim Pool Works</u></i>						
1	Pool with wet deck		Item			375,000.00
2	Plant		Item			40,000.00
3	Solar matting tube pool heating		Item			30,000.00
<u>Learn To Swim Pool Works</u>						Total : 445,000.00
<i>Trade : 7 <u>Hydrotherapy Pool Works</u></i>						
1	Hydrotherapy pool building	220.00	m2	2,000.00		440,000.00

Trade Breakup

Job Name : <u>A1055 MTB POOL 1</u>	Job Description
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 1

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 7 <u>Hydrotherapy Pool Works</u></i>						<i>(Continued)</i>
2	Pool with wet deck		Item			300,000.00
3	Plant		Item			40,000.00
4	Solar matting tube pool heating		Item			30,000.00
<u>Hydrotherapy Pool Works</u>					Total :	810,000.00
<i>Trade : 8 <u>Water Play Infastructure</u></i>						
1	Water play infrastructure including fountains, sprays & sensors		Item			50,000.00
<u>Water Play Infastructure</u>					Total :	50,000.00
<i>Trade : 9 <u>Playground Structure</u></i>						
1	Proprietary playground structure including softfall		Item			75,000.00
<u>Playground Structure</u>					Total :	75,000.00

INDICATIVE COST ESTIMATE

MOUNT BARKER MEMORIAL POOL FEASIBILITY STUDY - OPTION 2

ROBERTS GARDINER ARCHITECTS

CHRIS OKEEFE CONSTRUCTION COST CONSULTANT

Nov-19

**MOUNT BARKER MEMORIAL POOL
FEASIBILITY STUDY - OPTION 2**

Ref : A1055

INDICATIVE COST ESTIMATE

11/11/2019

PROJECT COST SUMMARY

Total Cost from Summary	\$ 7,718,300
Design/ Contract Contingency (15 %)	\$ 1,157,745
Professional Fees (10%)	\$ 771,830
	<hr/>
Subtotal	\$ 9,647,875
GST	\$ 964,788
	<hr/>
TOTAL INDICATIVE COST ESTIMATE	\$ 10,612,663

Exclusions :

Cost escalation to date of tender
Loose furniture & equipment - Gym & Clubrooms
Upgrade of existing services
Unknown ground conditions

Full Estimate Summary

Job Name : A1055 MTB POOL 2
 Client's Name: Shire of Plantagenet

Job Description
 MOUNT BARKER MEMORIAL POOL
 FEASABILITY STUDY - OPTION 2

Trd No.	Trade Description	Trade %	Cost/m2	Sub Total	Mark Up %	Trade Total
	Demolition	1.71		131,700		131,700
	Site Works	13.48		1,040,360		1,040,360
	Site Services	2.12		163,540		163,540
	Building Works	25.89		1,998,000		1,998,000
	Main Pool Works	34.46		2,659,950		2,659,950
	Learn To Swim Pool Works	10.23		789,750		789,750
	Hydrotherapy Pool Works	10.49		810,000		810,000
	Water Play Infastructure	0.65		50,000		50,000
	Playground Structure	0.97		75,000		75,000
		100.00		7,718,300		7,718,300
					Final Total : \$	7,718,300

Trade Breakup

Job Name : A1055 MTB POOL 2

Job Description

Client's Name: Shire of Plantagenet

MOUNT BARKER MEMORIAL POOL
FEASABILITY STUDY - OPTION 2

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 1 <u>Demolition</u></i>						
1	Empty pool		Item			2,000.00
2	Break up & remove existing toddler pool structure & associated items	1.00	No	10,000.00		10,000.00
3	Break up & remove existing 50m pool structure & associated items	1.00	No	28,000.00		28,000.00
4	Take up & remove existing sunshade structures	2.00	No	1,500.00		3,000.00
5	Take up & remove existing sunshade umbrellas	2.00	No	250.00		500.00
6	Demolish existing pool building including plant structure	225.00	m2	250.00		56,250.00
7	Break up & remove existing paving	528.00	m2	35.00		18,480.00
8	Take down & remove existing perimeter fence	340.00	m	15.00		5,100.00
9	Preliminaries		Item			8,370.00
<u>Demolition</u>						Total : 131,700.00
<i>Trade : 2 <u>Site Works</u></i>						
1	Site strip	8,016.00	m2	1.00		8,016.00
2	Bulk excavation & stockpile	2,405.00	m3	20.00		48,100.00
3	Bulk filling	12,024.00	m3	30.00		360,720.00
4	Subsoil drain	366.00	m	75.00		27,450.00
5	Carpark including kerbing, carbay marking, signage & stormwater drainage	2,880.00	m2	75.00		216,000.00
6	Concrete paving	2,240.00	m2	80.00		179,200.00
7	Perimeter fence	274.00	m	150.00		41,100.00
8	Extra over double gate with access controls	1.00	No	5,000.00		5,000.00
9	Turf including reticulation	3,375.00	m2	25.00		84,375.00
10	Preliminaries		Item			70,399.00
<u>Site Works</u>						Total : 1,040,360.00
<i>Trade : 3 <u>Site Services</u></i>						
1	Allowance for power/lighting upgrade		Item			150,000.00
2	Preliminaries		Item			13,540.00
<u>Site Services</u>						Total : 163,540.00
<i>Trade : 4 <u>Building Works</u></i>						

Trade Breakup

Job Name : <u>A1055 MTB POOL 2</u>	<u>Job Description</u>
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 2

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 4 <u>Building Works</u></i>						
1	Plant/Store	203.00	m2	1,000.00		203,000.00
2	Reception/Cafe	248.00	m2	2,000.00		496,000.00
3	Office/Cafe Fitout		Item			150,000.00
4	Toilets/Change	113.00	m2	3,000.00		339,000.00
5	Club/Creche/Fitness/Gym	450.00	m2	1,750.00		787,500.00
6	Umbrella shade structures	9.00	No	2,500.00		22,500.00
<u>Building Works</u>						Total : 1,998,000.00
<i>Trade : 5 <u>Main Pool Works</u></i>						
<u>Main Pool - 50m x 6 Lane</u>						
1	Granular drainage layer with DPM & 75 thick no fines concrete over	900.00	m2	40.00		36,000.00
2	New wet deck pool - 50m x 6 lane		Item			1,250,000.00
3	Tiled raised ends		Item			80,000.00
4	Balance tank		Item			90,000.00
5	Backwash tank		Item			70,000.00
6	Plant		Item			375,000.00
7	Solar matting tube pool heating		Item			140,000.00
8	Pool Cover, lane ropes, starting blocks, etc		Item			100,000.00
9	Fill pool		Item			2,000.00
10	Shade structure	1,477.00	m2	350.00		516,950.00
<u>Main Pool Works</u>						Total : 2,659,950.00
<i>Trade : 6 <u>Learn To Swim Pool Works</u></i>						
<u>Learn to Swim Pool</u>						
1	Pool with wet deck		Item			375,000.00
2	Plant		Item			40,000.00
3	Solar matting tube pool heating		Item			30,000.00
4	Shade structure	985.00	m2	350.00		344,750.00
<u>Learn To Swim Pool Works</u>						Total : 789,750.00
<i>Trade : 7 <u>Hydrotherapy Pool Works</u></i>						

Trade Breakup

Job Name :	<u>A1055 MTB POOL 2</u>	<u>Job Description</u>
Client's Name:	<u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 2

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 7 <u>Hydrotherapy Pool Works</u></i>						
1	Hydrotherapy pool building	220.00	m2	2,000.00		440,000.00
2	Pool with wet deck		Item			300,000.00
3	Plant		Item			40,000.00
4	Solar matting tube pool heating		Item			30,000.00
<u>Hydrotherapy Pool Works</u>						Total : 810,000.00
<i>Trade : 8 <u>Water Play Infastructure</u></i>						
1	Water play infastructure including fountains, sprays & sensors		Item			50,000.00
<u>Water Play Infastructure</u>						Total : 50,000.00
<i>Trade : 9 <u>Playground Structure</u></i>						
1	Proprietary playground structure including softfall		Item			75,000.00
<u>Playground Structure</u>						Total : 75,000.00

INDICATIVE COST ESTIMATE

**MOUNT BARKER MEMORIAL POOL
FEASIBILITY STUDY - OPTION 3**

ROBERTS GARDINER ARCHITECTS

CHRIS OKEEFE CONSTRUCTION COST CONSULTANT

Nov-19

INDICATIVE COST ESTIMATE

11/11/2019

PROJECT COST SUMMARY

Total Cost from Summary	\$ 7,018,000
Design/ Contract Contingency (15 %)	\$ 1,052,700
Professional Fees (10%)	\$ 701,800
Subtotal	\$ 8,772,500
GST	\$ 877,250
TOTAL INDICATIVE COST ESTIMATE	\$ 9,649,750

Exclusions :

Cost escalation to date of tender
Loose furniture & equipment - Gym & Clubrooms
Upgrade of existing services
Unknown ground conditions

Full Estimate Summary

Job Name : <u>AI055 MTB POOL 3</u>	Job Description
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 3

Trd No.	Trade Description	Trade %	Cost/m2	Sub Total	Mark Up %	Trade Total
	Demolition	1.88		131,700		131,700
	Site Works	14.86		1,043,060		1,043,060
	Site Services	2.33		163,740		163,740
	Building Works	28.54		2,003,000		2,003,000
	Pool Works	27.81		1,951,750		1,951,750
	Learn To Swim Pool Works	11.25		789,750		789,750
	Hydrotherapy Pool Works	11.54		810,000		810,000
	Water Play Infastructure	0.71		50,000		50,000
	Playground Structure	1.07		75,000		75,000
		100.00		7,018,000		7,018,000
Final Total : \$						7,018,000

Trade Breakup

Job Name : <u>A1055 MTB POOL 3</u>	<u>Job Description</u>
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 3

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 1 <u>Demolition</u></i>						
1	Empty pool		Item			2,000.00
2	Break up & remove existing toddler pool structure & associated items	1.00	No	10,000.00		10,000.00
3	Break up & remove existing 50m pool structure & associated items	1.00	No	28,000.00		28,000.00
4	Take up & remove existing sunshade structures	2.00	No	1,500.00		3,000.00
5	Take up & remove existing sunshade umbrellas	2.00	No	250.00		500.00
6	Demolish existing pool building including plant structure	225.00	m2	250.00		56,250.00
7	Break up & remove existing paving	528.00	m2	35.00		18,480.00
8	Take down & remove existing perimeter fence	340.00	m	15.00		5,100.00
9	Preliminaries		Item			8,370.00
<u>Demolition</u>						Total : 131,700.00
<i>Trade : 2 <u>Site Works</u></i>						
1	Site strip	8,016.00	m2	1.00		8,016.00
2	Bulk excavation & stockpile	2,405.00	m3	20.00		48,100.00
3	Bulk filling	12,024.00	m3	30.00		360,720.00
4	Subsoil drain	366.00	m	75.00		27,450.00
5	Carpark including kerbing, carbay marking, signage & stormwater drainage	2,880.00	m2	75.00		216,000.00
6	Concrete paving	1,994.00	m2	80.00		159,520.00
7	Perimeter fence	274.00	m	150.00		41,100.00
8	Extra over double gate with access controls	1.00	No	5,000.00		5,000.00
9	Turf including reticulation	4,275.00	m2	25.00		106,875.00
10	Preliminaries		Item			70,279.00
<u>Site Works</u>						Total : 1,043,060.00
<i>Trade : 3 <u>Site Services</u></i>						
1	Allowance for power/lighting upgrade		Item			150,000.00
2	Preliminaries		Item			13,740.00
<u>Site Services</u>						Total : 163,740.00

Trade Breakup

Job Name : <u>A1055 MTB POOL 3</u>	Job Description
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 3

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 4 <u>Building Works</u></i>						
1	Plant/Store	203.00	m2	1,000.00		203,000.00
2	Reception/Cafe	248.00	m2	2,000.00		496,000.00
3	Office/Cafe Fitout		Item			150,000.00
4	Toilets/Change	113.00	m2	3,000.00		339,000.00
5	Club/Creche/Fitness/Gym	450.00	m2	1,750.00		787,500.00
6	Umbrella shade structures	11.00	No	2,500.00		27,500.00
<u>Building Works</u>						Total : 2,003,000.00
<i>Trade : 5 <u>Pool Works</u></i>						
<u>Main Pool - 25m x 8 Lane</u>						
1	Granular drainage layer with DPM & 75 thick no fines concrete over	500.00	m2	40.00		20,000.00
2	New wet deck pool - 25m x 8 lane		Item			820,000.00
3	Tiled raised ends		Item			105,000.00
4	Balance tank		Item			80,000.00
5	Backwash tank		Item			60,000.00
6	Plant		Item			350,000.00
7	Solar matting tube pool heating		Item			100,000.00
8	Pool Cover, lane ropes, starting blocks, etc		Item			70,000.00
9	Fill pool		Item			2,000.00
10	Shade structure	985.00	m2	350.00		344,750.00
<u>Pool Works</u>						Total : 1,951,750.00
<i>Trade : 6 <u>Learn To Swim Pool Works</u></i>						
<u>Learn to Swim Pool</u>						
1	Pool with wet deck		Item			375,000.00
2	Plant		Item			40,000.00
3	Solar matting tube pool heating		Item			30,000.00
4	Shade structure	985.00	m2	350.00		344,750.00
<u>Learn To Swim Pool Works</u>						Total : 789,750.00

Trade Breakup

Job Name : <u>A1055 MTB POOL 3</u>	Job Description
Client's Name: <u>Shire of Plantagenet</u>	MOUNT BARKER MEMORIAL POOL FEASABILITY STUDY - OPTION 3

Item No.	Item Description	Quantity	Unit	Rate	Mark Up %	Amount
<i>Trade : 7 <u>Hydrotherapy Pool Works</u></i>						
1	Hydrotherapy pool building	220.00	m2	2,000.00		440,000.00
2	Pool with wet deck		Item			300,000.00
3	Plant		Item			40,000.00
4	Solar matting tube pool heating		Item			30,000.00
<u>Hydrotherapy Pool Works</u>						Total : 810,000.00
<i>Trade : 8 <u>Water Play Infastructure</u></i>						
1	Water play infrastructure including fountains, sprays & sensors		Item			50,000.00
<u>Water Play Infastructure</u>						Total : 50,000.00
<i>Trade : 9 <u>Playground Structure</u></i>						
1	Proprietary playground structure including softfall		Item			75,000.00
<u>Playground Structure</u>						Total : 75,000.00

Council

MOUNT BARKER ROADSIDE WEED STRATEGY

Report Oyster Harbour Catchment Roadside Weed
Survey

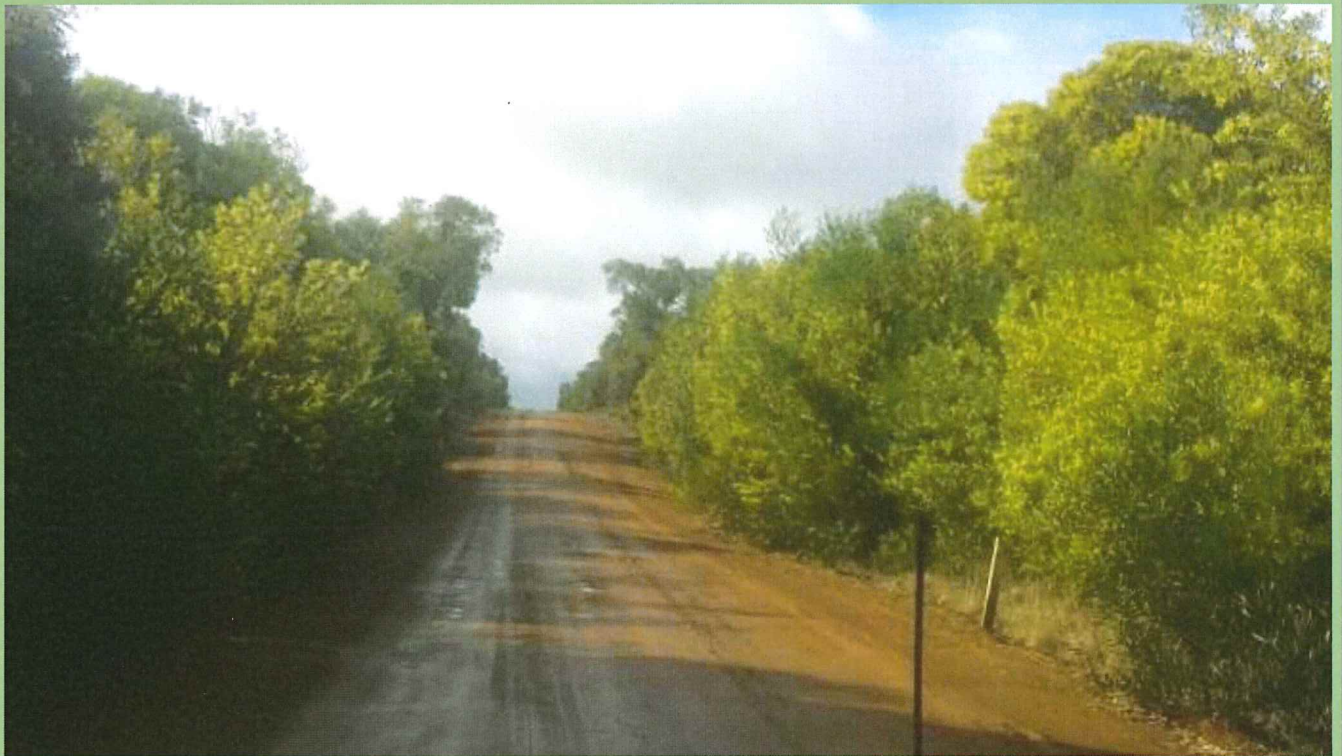
Meeting Date: 3 December 2019

Number of Pages : 31

Oyster Harbour Catchment



Roadside Weed Survey



2019



Commissioned by: David Lynch	Title: Manager Works Shire of Plantagenet
Prepared by: Robbie Monck	Title: Casual Officer
Date: August 2019	Season: Winter

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1.0 Scope

Undertake a visual weed survey of the roadside vegetation within the Oyster Harbour Catchment that is managed by the Shire of Plantagenet.

Compile a report based on the observations make recommendations for treatment and potential funding sources

2.0 Introduction

Invasive weeds threaten the biodiversity, economy and visual amenity of the area by competing with local endemic species that support the native fauna and flora. Impact the economy by establishing on pasture and cropping grounds, impacting yields and adding to herbicide applications. The purpose of this report is to give an indication as to the extent of spread of identified environmental weeds.

3.0 Limitations

Only those weeds that are actively growing at the time have been identified. The survey has been undertaken at the end of autumn and the beginning of winter it is too early or late in the growing season for the plants to be flowering, therefore there may be a percentage of species that have not been identified or identified correctly. The majority of bulbous weeds have not yet emerged and a lot of the summer weeds have died off and therefore have not been identified within this survey.

With these limitations the survey has identified a number of the more serious environmental weeds in the region along with a few emerging species that will require monitoring.

4.0 Environment

The area surveyed is commonly known as the Roadside, this is the area of land that lies between the maintenance zone of the road and the property boundary. The vegetation along the road verge changes considerable in the rural areas within the shire. From areas of pristine bush, typically alongside a natural reserve or national park to areas that has been overgrown with weeds and escaped grasses from bounding pasture.

Image 1



Courteous: HOWSON Management, SoP Road Hierarchy Road Construction and Maintenance Strategy 2013

5.0 Methodology

A visual inspection of the road verges was undertaken in May and June 2019, this was a drive by inspection at low speed with frequent stopping to log and aid in the identification of the invasive species.

Weeds targeted are the WONS (Weeds of National Significance), weeds on the WAOL (Western Australian Organism List) along with environmental weeds. Areas that have been affected by agricultural weeds and pastures have not been mapped; a second more in-depth survey looking at the condition of the roadside vegetation would be required. From this a management plan could be developed to target and maintain the healthier roadside areas and limit the spread of weeds.

6.0 Location

Rural roads that are bound and managed by the Shire of Plantagenet and are also within the Oyster Harbour Catchment area.

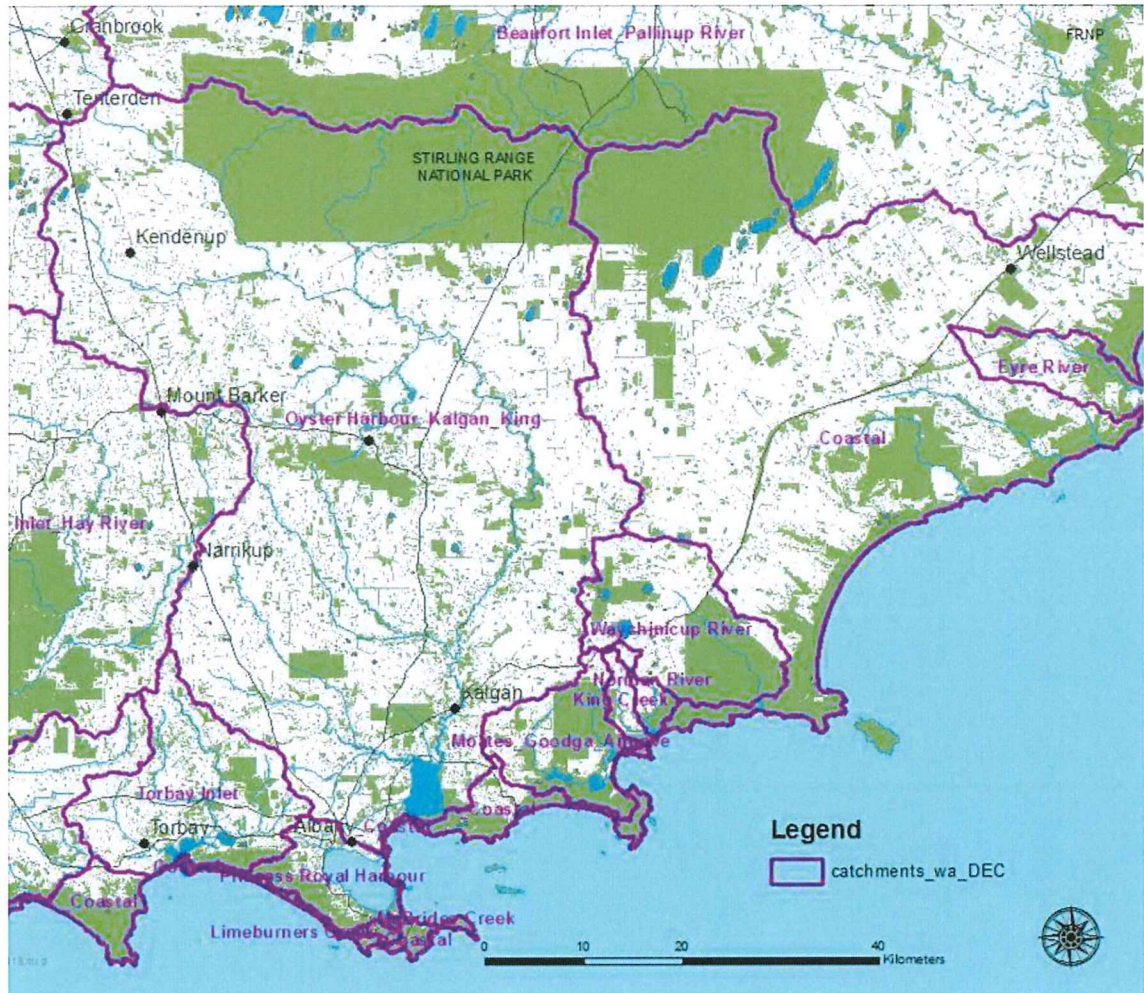


Image courteous of the Oyster Harbour Catchment Group

7.0 Weeds.

7.1 Definition;

A weed can be described as an introduced or native plant growing outside its natural area and spreading into areas where they are not valued (A plant growing in an undesirable location).

Weeds could also be described as a plant that has the potential to affect the economy where it requires intervention to reduce its impact on agricultural, aquaculture and the biodiversity of the area.

If not controlled weeds have the ability to create a mono culture where the weed has out-competed the endemic species and by doing this they become an ecological transformer. Creating an environment suited to the individual growing requirements of that species.

The impacts of a mono culture, reduces the biodiversity of the area. They have potential to increase the risk from fire by increasing the fuel load and increasing the intensity of a wild fire.

These areas are difficult to maintain and take considerable effort over several years to re-establish back to a natural state. Plants like Sydney Golden Wattle and Tagasaste are legumes and change the chemical structure of the soil by fixing nitrogen into the soil limiting the growth of many native species that are more suited to low fertility areas.

The following list of weeds in order of priority from WoNS and WAOL listed species to more localised environmental weeds and emerging species.

8.0 WoNS (Weeds of National Significants)

8.1 Bridal Creeper (*Asparagus asparagoides*)



Photo Takalarup Rd

Area	Affecting over 25% of the roads surveyed
Description	Winter climber with shiny heart shaped leaves to 5cm long, Small white flowers producing red berries Root stock is rhizomatous which can have a matting effect
Spread	Berries are spread by birds with new plants establishing under roosting and nesting sites
Control	Biological control Infect areas with rust spores sourced from an infected site. Place infected samples into a sealed plastic bag for a couple of days, rub onto outbreaks to control. Chemical control 0.02g metsulphuron plus 25ml of wetting agent in 10lts water applied in winter. Effects from this treatment will not be observed until the following season. Manual removal, dig out entire root stock.

8.2 Blackberry (*Rubus fruticosus*)



Photo Sixpenny Road

- Area** Affecting 0.07% of the roads surveyed, over 8 locations, Blackberry has the potential to choke water courses and develop into impenetrable brambles if not controlled.
- Description** Perennial, semi deciduous plant that produces thorny stems up to 7 metres long, these stems intertwine to form a bramble.
- Flowers** Late spring to early summer, producing a white flower with 5 petals to 20mm long and surrounding numerous stamens. Producing a berry that starts off red and changing to black as the fruit matures
- Spread** the vines spread by layering. The long vines droop and reach the ground where new roots will form creating a new plant. The fruit also produce up to 80 seeds which can be spread by birds and foxes, Seed which have passed through an animal have a higher germination rate.
- Control** 100ml glyphosate, 1g metsulfuron and 25ml of wetting agent in 10lts of water applied when flowering.

9.0 Environmental Weeds

9.1 African Love Grass (*Cenchrus macrourus*)



Takalarup Rd



Takalarup Rd

Area Affecting over 35% of the roads surveyed, over 141 locations observed throughout the OHC ranging from masses of plants covering the entire roadside to sparse individuals spreading along the maintenance zone on the gravel roads.

Description Tufted grass growing to 1200mm in height. A major environmental weed as it forms dense stands which crowd out the native species; upright with branched seed heads which may droop when mature

Spread Reproduced by seed which is dispersed in mud, soil and by contaminated vehicles.

Control; City of Albany has had success using Flupropanate herbicide (Taskforce), a selective herbicide targeting tufting grasses and also has a soil bourn residue that will act in a similar way to a post emergent herbicide. Application rate as recommended for serrated tussock grass 200ml in 100lts water. Successful trails using fire and herbicide by NSW National Parks and Wildlife Service have seen successful eradication of African Love Grass.

9.2 Sydney Golden Wattle (*Acacia longifolia*)



Photos Bloxidge Rd Takalarup

- Area** Affecting over 5.35% of the roads surveyed, over 99 locations observed throughout the OHC ranging from masses of plants covering the entire roadside to sparse individuals.
- Description** Shrub to small tree to 10 metres high, smooth dark grey bark with dark green glossy leaves. Leaves are 5 to 15 cm long and 5 to 15 mm wide, thin and pliable with between 2 and 4 prominent longitudinal veins. Flowers are bright yellow and cylindrical producing seed pods up to 12 cm long, straight to slightly curved.
Native to New South Wales and Victoria it is becoming widespread throughout the South West, Great Southern and Lower Wheat Belt regions of Western Australia
- Spread** By seed which is dispersed by birds and ants.
- Control** Hand weed seedlings to small saplings.
Larger saplings and trees cut trunks low to the ground ensuring that all branches and leaf nodes have been removed and apply Glyphosate at 50/50 mix with water to the entire cut.
Basal spray the entire lower 50cm of the trunk with 1ltr of Access to 60ltrs of diesel, ensuring that there are no branches or leaf nodes lower than the sprayed area.
Larger infestations can be mulched on site, the mulch will aid in the suppression of new growth

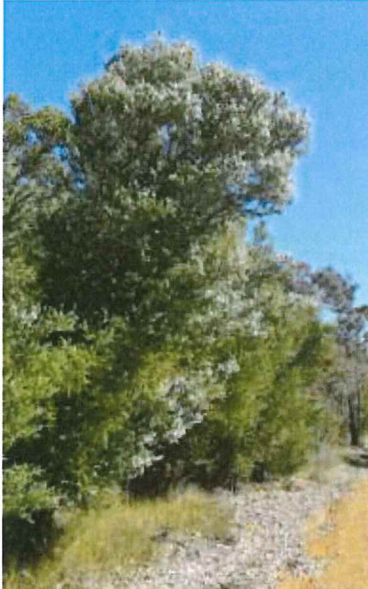
9.3 Tagasaste (*Chamaecytisus palmensis*)



Photos Bloxidge Rd Takalarup

- Area** Affecting over 1.86% of the roads surveyed, over 69 locations observed throughout the OHC ranging from masses of plants covering the entire roadside to sparse individuals.
- Description** Shrub to small tree to 5 metres high with weeping branches. Leaves are 10 to 45mm long grey green with soft with a hairy underside. Flowers are scented, creamy white pea like, 12 to 17mm long .Seed pods are flat 40 to 50mm long and 8 to 12mm wide.
- Spread** Seeds are spread by birds, ants
- Control** Larger infestations can be mulched on site, the mulch will aid in the suppression of new growth. Hand weed seedlings to small saplings. Larger saplings and trees cut trunks low to the ground ensuring that all branches and leaf nodes have been removed and apply Glyphosate at 50/50 mix with water to the entire cut.
Basal spray the entire lower 50cm of the trunk with 1ltr of Access to 60ltrs of diesel, ensuring that there are no branches or leaf nodes lower than the sprayed area.

9.4 Victorian or Coastal Tea Tree (*Leptospermum laevigatum*)



Photos O'Neil Rd

- Area** Affecting over 1.34% of the roads surveyed over, 40 locations observed throughout the OHC ranging from masses of plants covering the entire roadside to sparse individuals.
- Description** Large shrub to 5 metres high. Leaves are 15 to 30mm long grey green and leathery. Flowers are white with 5 broad petals surrounding a group of stamens. Seed pods are domed and woody with 7 to 10 valves.
- Spread** Seeds small and spread by wind, once stressed seed pods open releasing many small seeds.
- Control** Hand weed seedlings and small saplings, Cut and apply Glyphosate to the fresh cut at rate of 50/50 Glyphosate to water. Pile cut plants in a heap this will restrict the fallen seed to the immediate area. Follow up with a spray program within 1 to 2 years.
Basal spray the entire lower 50cm of the trunk with 200ml Access in 10ltrs of diesel, ensuring that there are no branches or leaf nodes lower than the sprayed area.

10.0 Emerging Weeds

10.1 Dolichos Pea

Climbing Perennial with heart shaped leaf, producing Pink, purple or white flowers in spring.
Spread by seed and rhizomes to control is difficult due to the rhizomes and extensive root system.
Chemical control can be carried out, Care should be taken to limit spray drift as this will affect other plants in the area.



10.2 Eucalyptus Species

E. grandis – Flooded gum – Rosewood
E. robusta – Swamp Mahogany
E. botryoides – Southern Mahogany – Bastard Jarrah
E. globulus - Tasmanian Blue Gum

Control for Eucalypts hand weed seedlings and small saplings, mechanical removal of trees, cut and paste cut with 50/50 glyphosate to water.



Tasmanian Blue Gums planted on the Left, Wildlings on the right

10.3 Ink Weed (*Phytolacca octandra*)

Native to tropical America, Ink Weed establishes in disturbed areas and poorly managed pasture. Seeds are spread by birds, short lived plant.
Control by cutting stem 5cm or lower below ground level.



10.4 Kangaroo apple (*Solanum aviculare*)

Native to the Eastern States, Kangaroo Apple establishes in disturbed areas along roadsides, creeks and rivers from Denmark to Cape Riche. Seeds are spread by birds.

Control by basal spray 150mm access in 10Lts Diesel, hand pull young plants.



10.5 Pampas Grass (*Cortaderia selloana*)

Observed in only one location on council roads it has also been observed in the rail corridor adjacent Albany Hwy near the old cemetery.

Pampas grass is prolific in areas around Albany, is manageable with little effort if caught early. If not controlled there is the potential that it will dominate an area within a short time frame.

Control, Remove seed heads, place in plastic bags and bury. Spray foliage with 100mm glyphosate, 25mm wetter in 10L water until just wet.



10.6 Blue Periwinkle (*Vinca Major*)

Observed in only one location on council roads. Ground cover with small oval shaped leaves, shiner on top and paler green underneath, light to dark purple flowers.

Spread by layering where nodes come into contact with the ground.

Control by mowing followed by spraying regrowth. Several applications will be required.



10.7 Pittosporum (*Pittosporum undulatum*)
Small tree to 8 mts high dark green glossy, elliptical leaves, flowers are small white to 10mm long producing a small orange fruit.

Control by hand weeding seedlings and small saplings, Basal spray lower trunk or cut and paste with a 50/50 glyphosate to water apply directly to the fresh cut.



10.8 Polygala

Small shrubs to 2.5mts, leaves are small, elliptical, light green to 5cm long. Flowers are pea like with white, purple or pink petals.

Control Cut and paste with a 50/50 glyphosate to water apply directly to the fresh cut.



10.9 Pine Species (*Pinus*)

P. elliottii – Slash Pine

P. pinaster – Maritime Pine

P. radiata – Monterey Pine

P. taeda – loblolly Pine.

Tall evergreen trees to 40 metres, rough bark and needle like leave protruding from a cluster of basal leaves.

Pine trees have spread from agroforestry ventures and historic farm gardens Being relatively shallow rooted they have the ability to lift road surfaces , adding to the coast of maintaining the road network.

Control, hand weed seedlings to small saplings, cut and paste with 50/150 mix water to glyphosate on the fresh cut.



10.10 Taylorina (*Psoralea pinnata*)

Small tree to 4mts, dark green needle like leaves, Flowers in small clusters of small purple/ pale blue pea flowers.

Control hand weed seedlings and small saplings, cut and paste with 50/50 water to glyphosate applied to the fresh cut. Large infestations of seedling can be sprayed with 1g metsulfuron and 25ml pulse in 10lts water.



10.11 Other Wattle (Acacia) Species

A melanoxylon –

Blackwood

A bailyana –

Cootamundra Wattle

A iteaphylla – Flinders Range Wattle

A meansii – Mearns

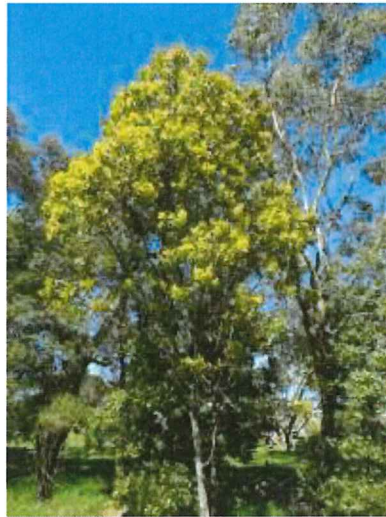
Black Wattle

A pycnantha – Golden Wattle

A podalyriifolia –

Queensland Silver Wattle

Control as per Sydney Golden Wattle



10.12 Asparagus (*Asparagus officinalis*)

Garden asparagus has been recorded due to its relation to other Asparagus species which has weed status. Although other species have not been identified as part of this survey, this may be due to the season of the survey.

Control, small infestations can be hand dug ensure to remove all tubers. Wipe with 1g metsulphuron in 10lts water with 100ml glyphosate 460g/L when flower buds t to appear.



10.13 Agapanthus (*Agapanthus praecox*)

Native to South Africa Agapanthus is a common garden plant which is becoming an emerging environmental weed in high rainfall areas. Easily spread by the many seeds produced

Control, spray 200ml garlon in 10lts diesel.

Typically planted on the roadside as an entrance garden to a property



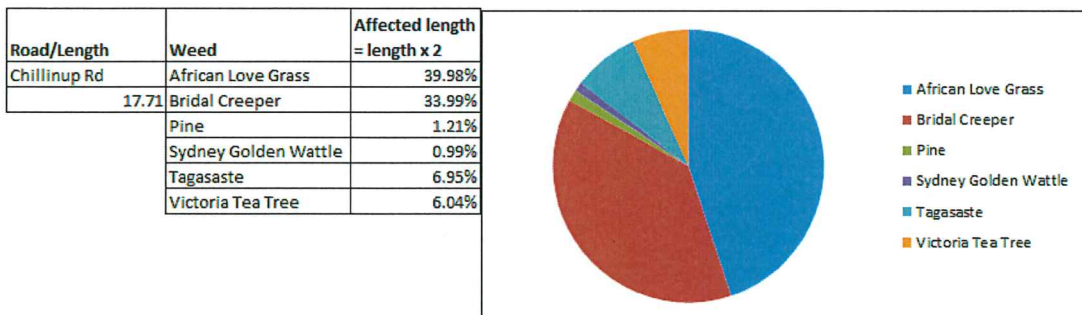
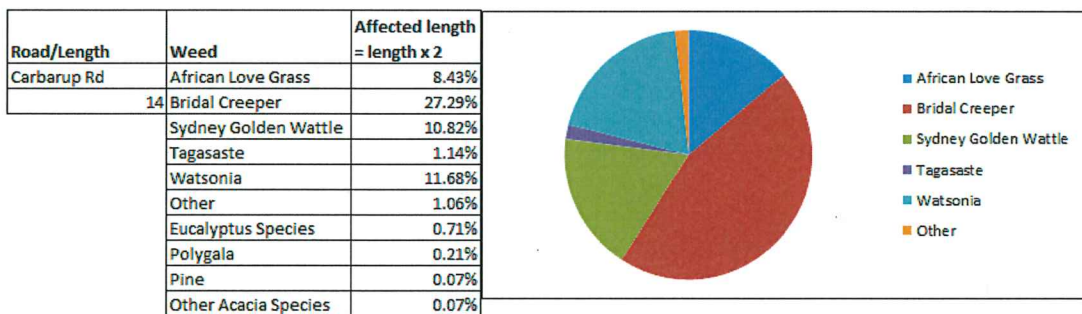
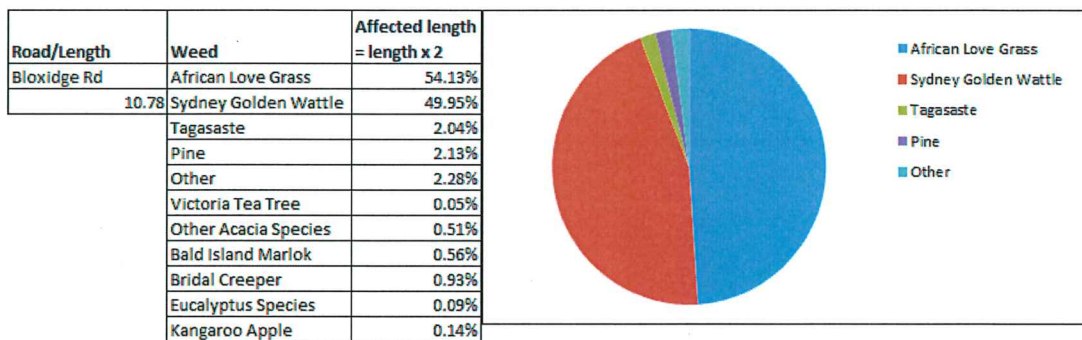
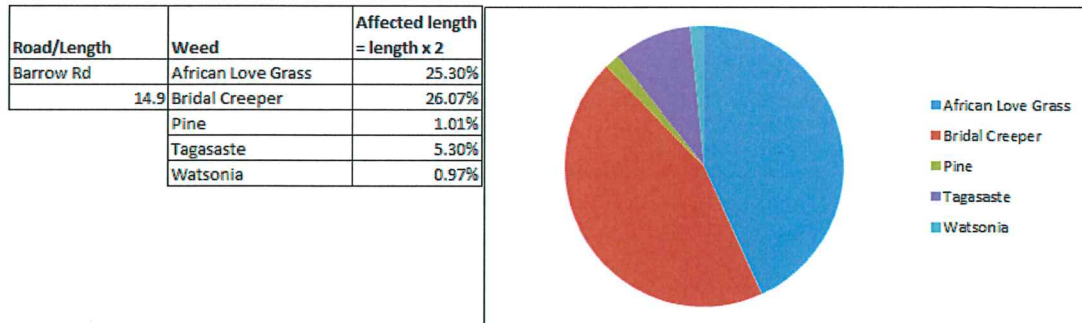
10.14 Bald Island Marlock (*Eucalyptus conferruminata*)

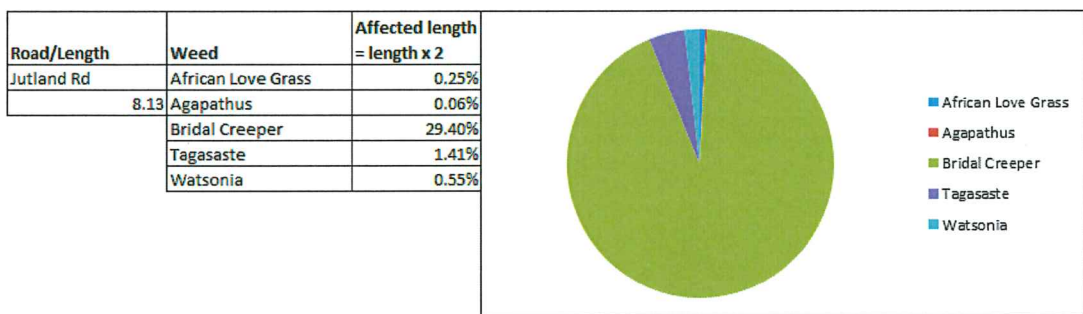
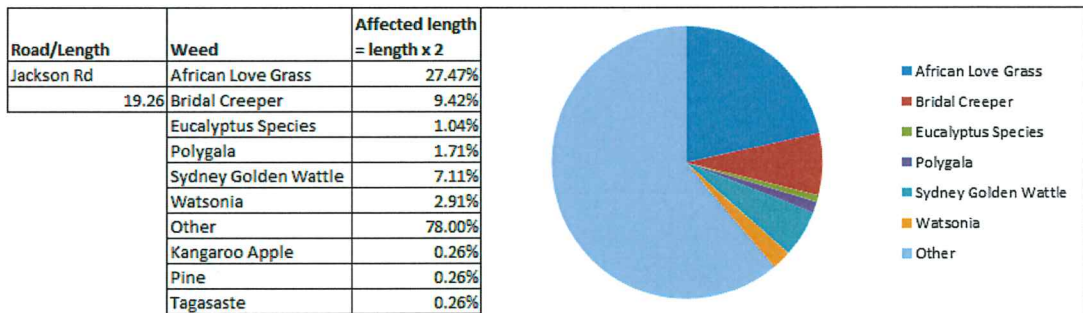
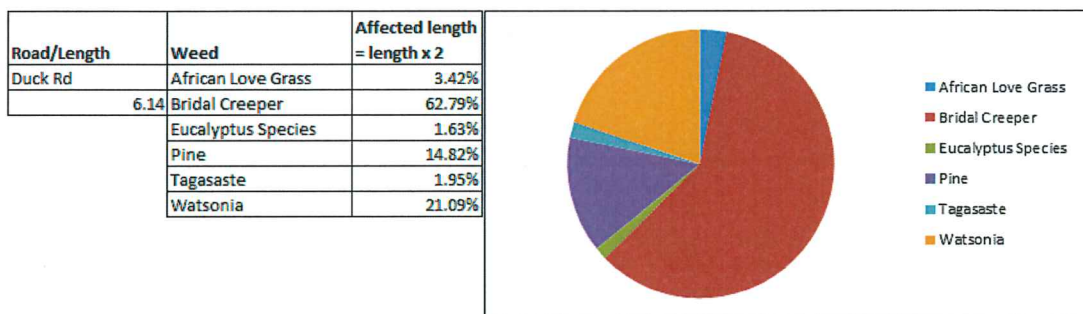
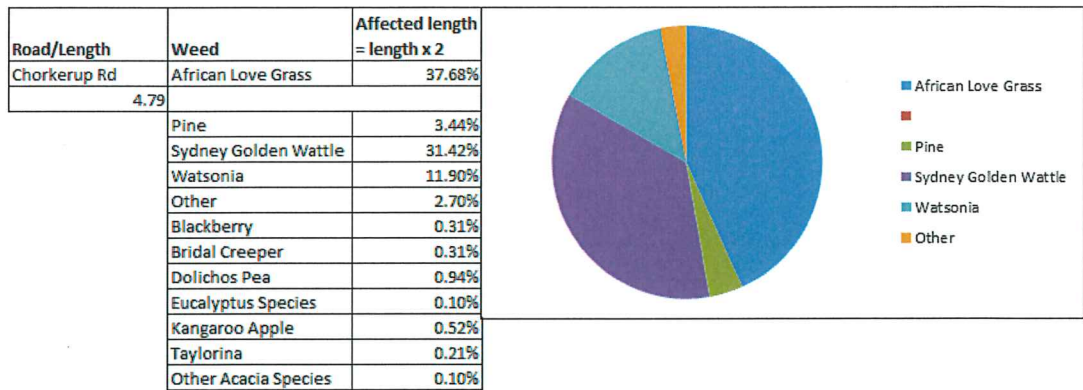
Small shrubby tree to 8mts, leaves are egg shaped, flowers are in clusters growing from a single branch union developing small finger like buds producing yellow/ green flowers. Native from Two People bay through to Esperance this tree has the potential to become weedy outside of its natural range. It is listed in South Australia and Victoria as an environmental Weed.

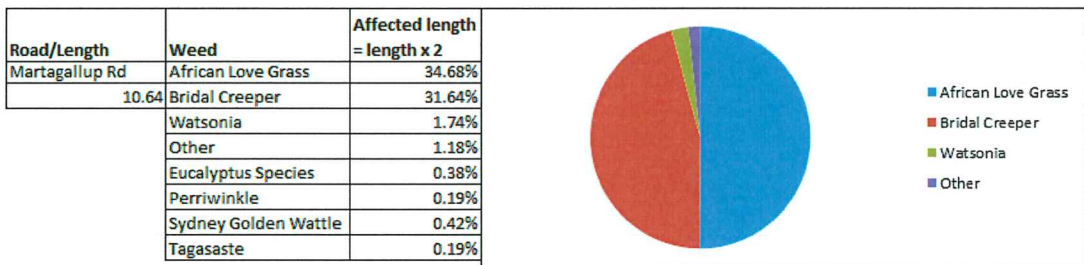
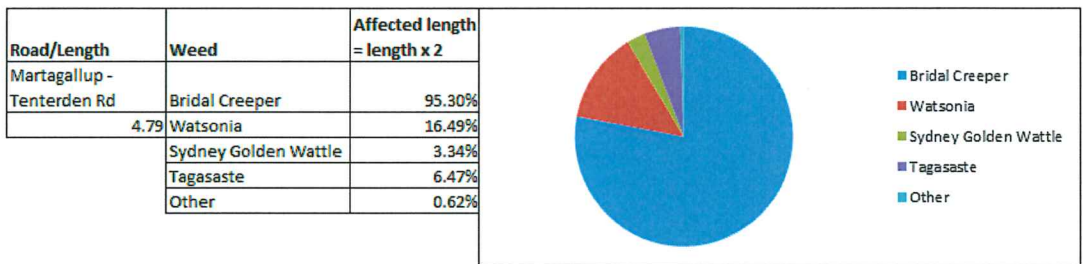
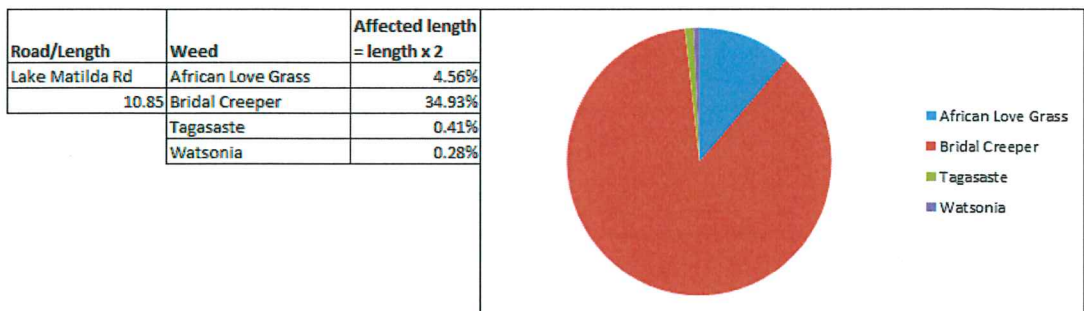
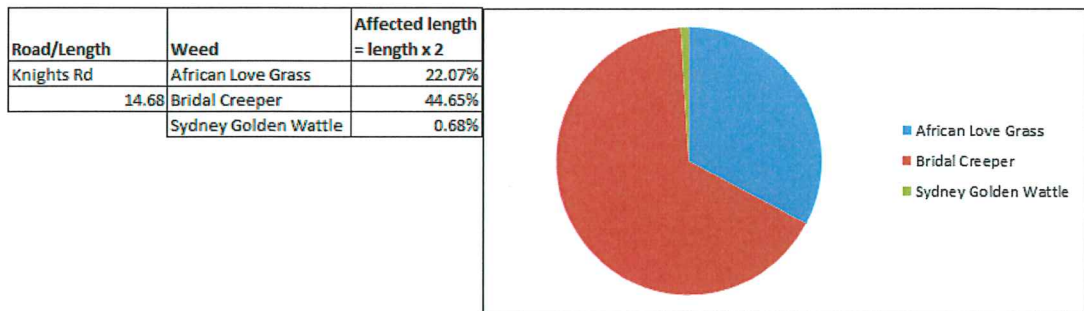
Photo is a revegetated gravel pit where Bald Island Marlock was planted; a recent fire has germinated many seeds. Albany Western Australia

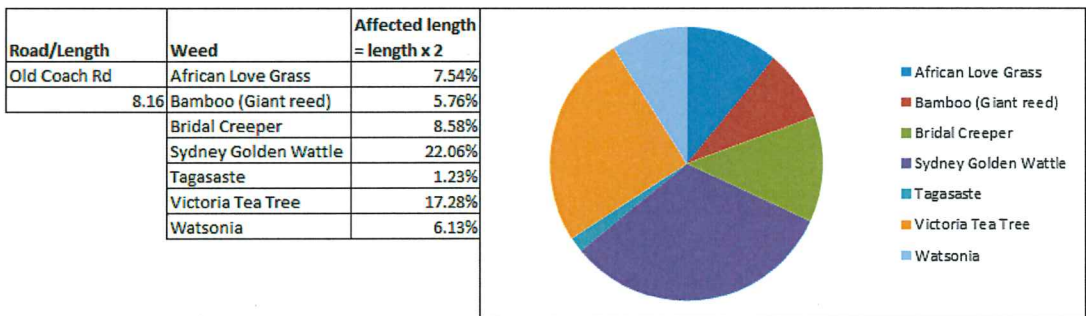
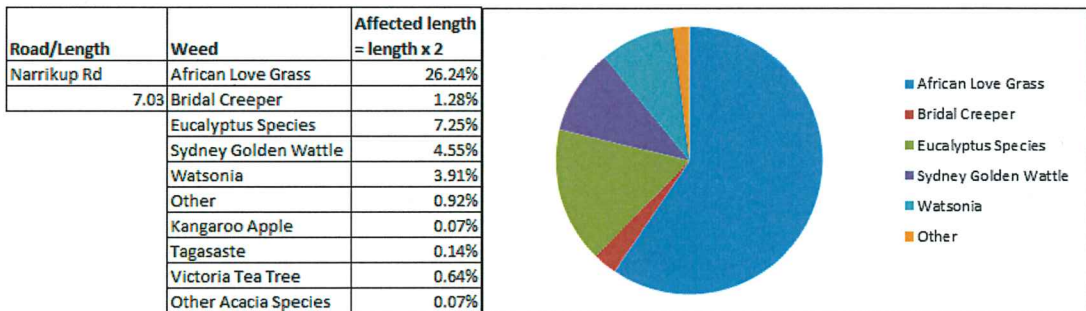
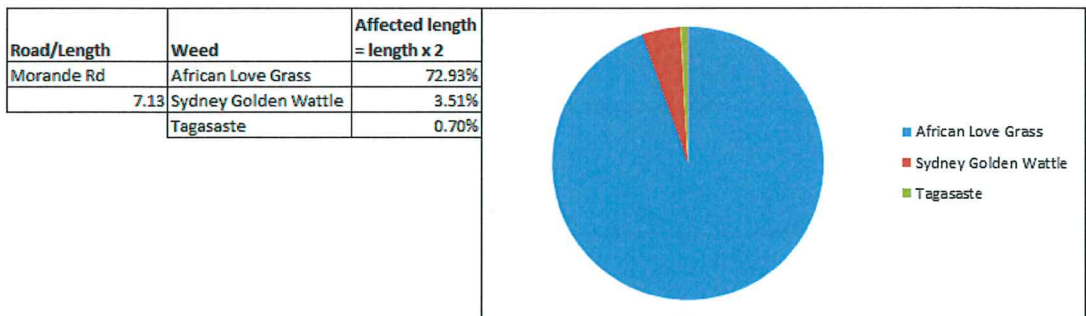
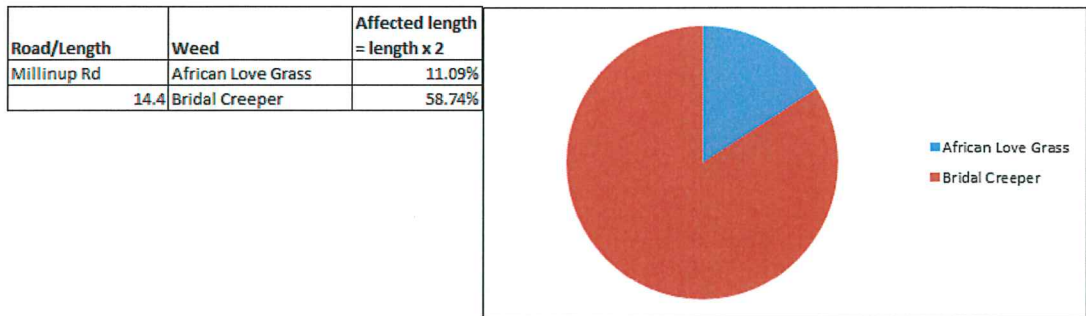


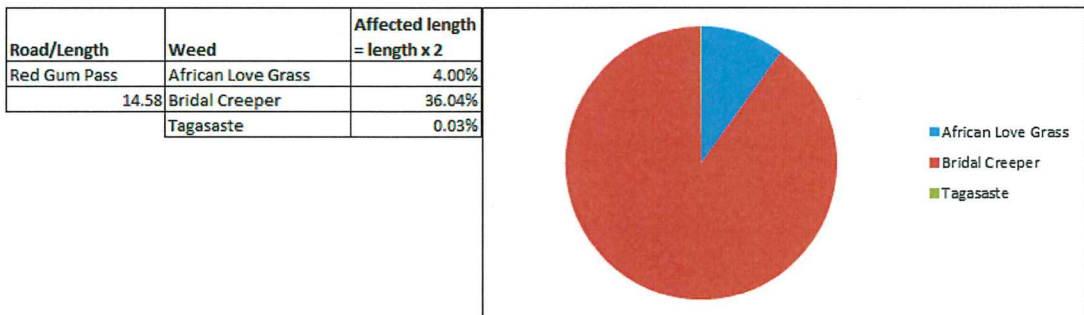
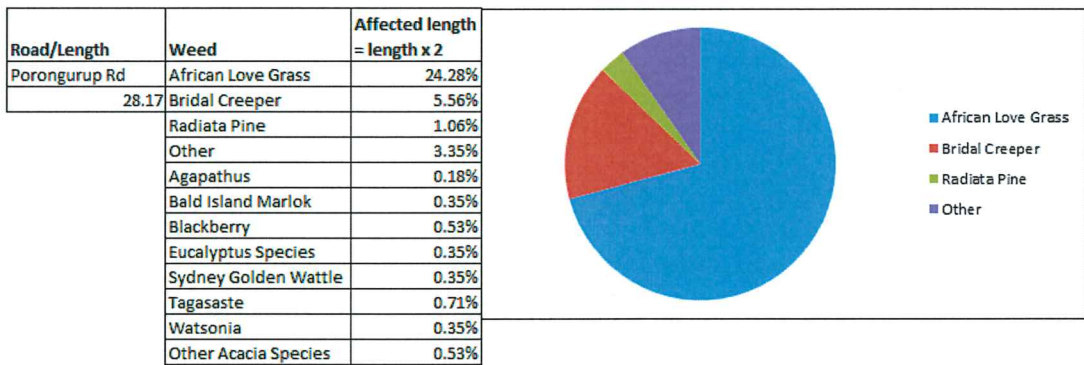
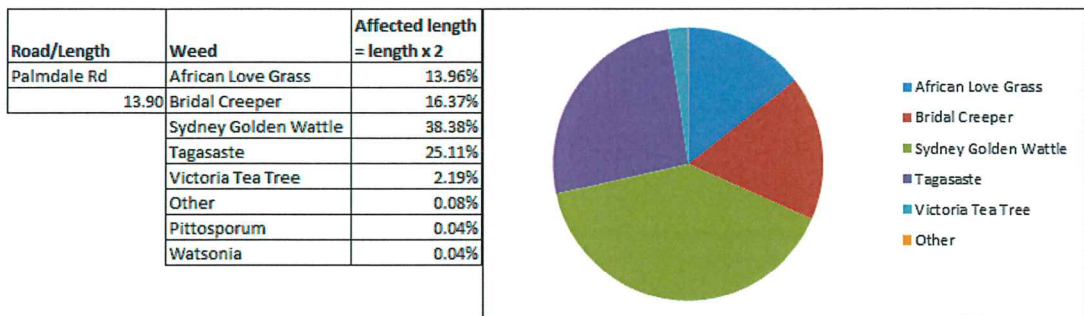
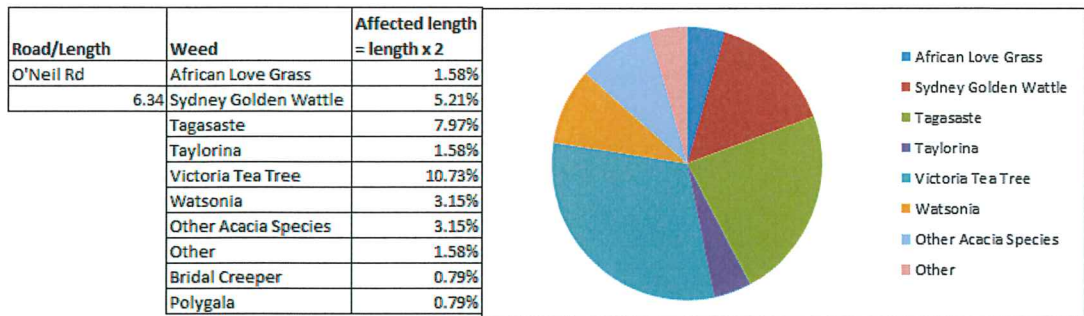
11.0 Statistics by Road

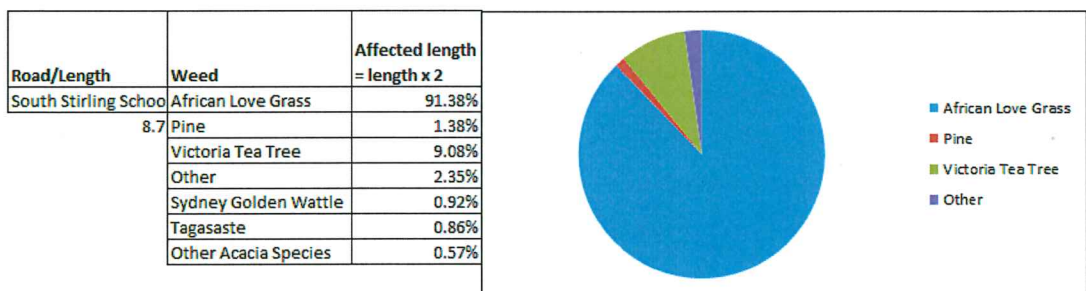
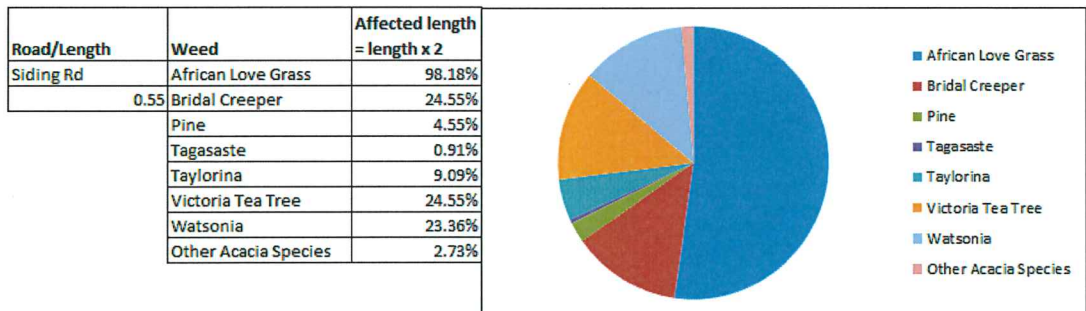
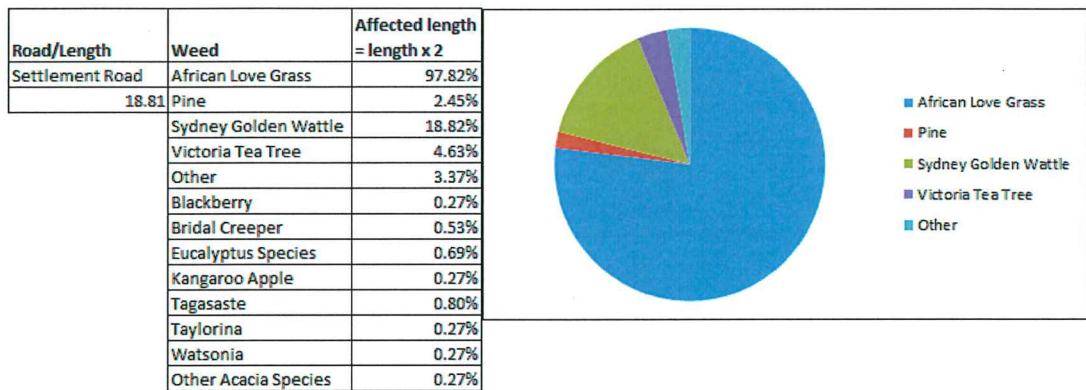
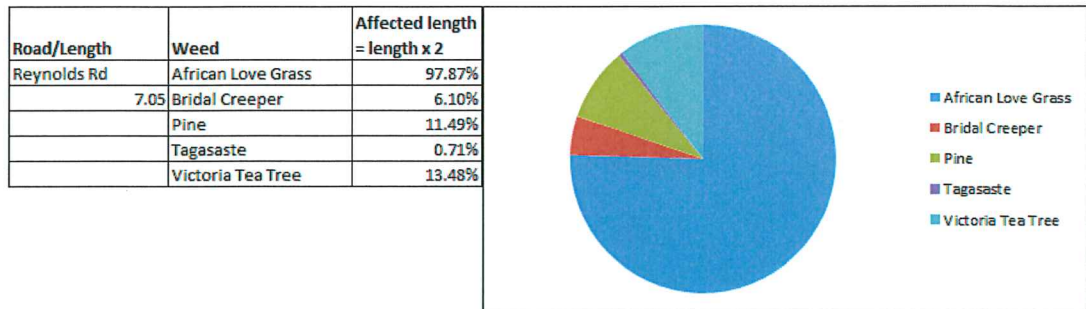


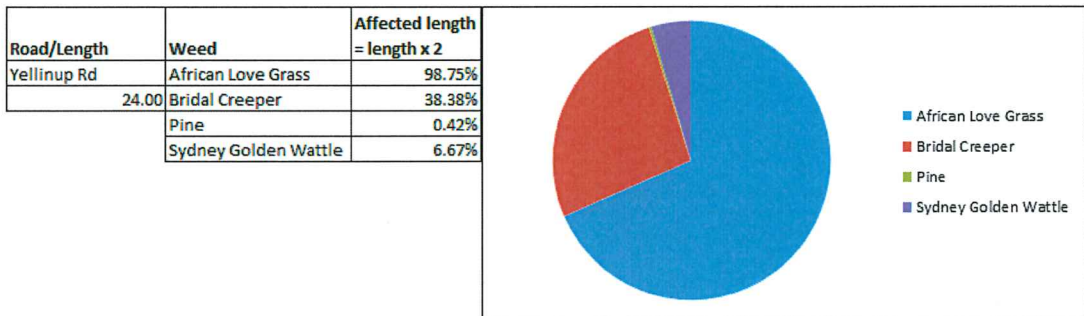
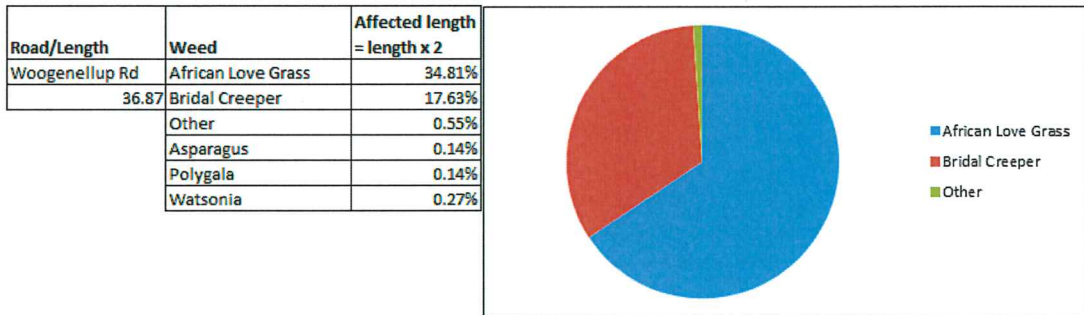
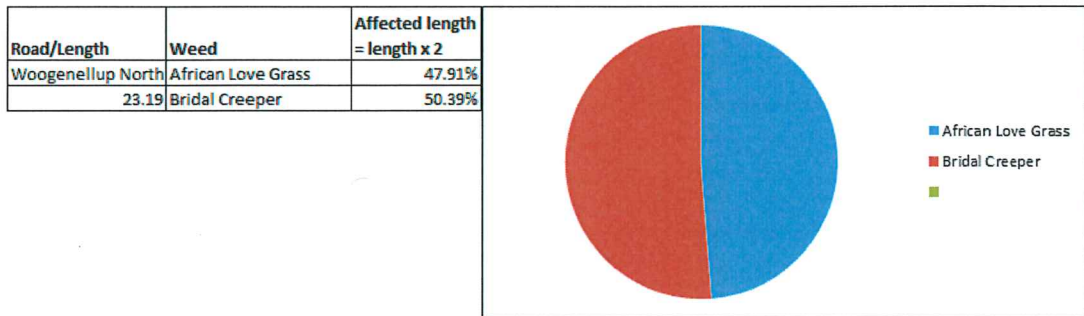
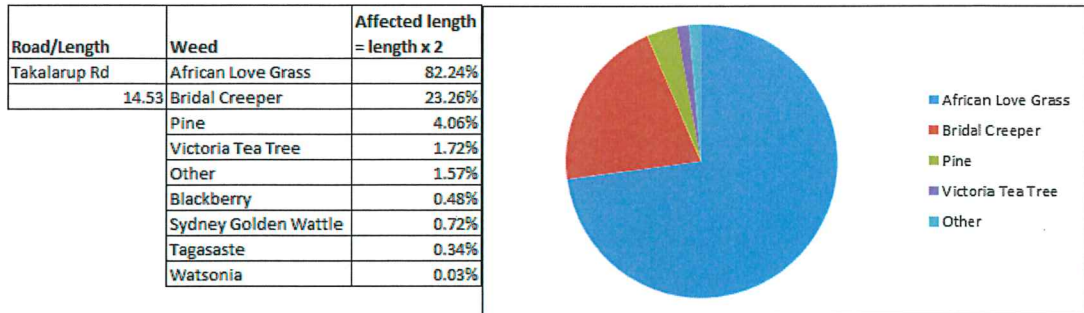




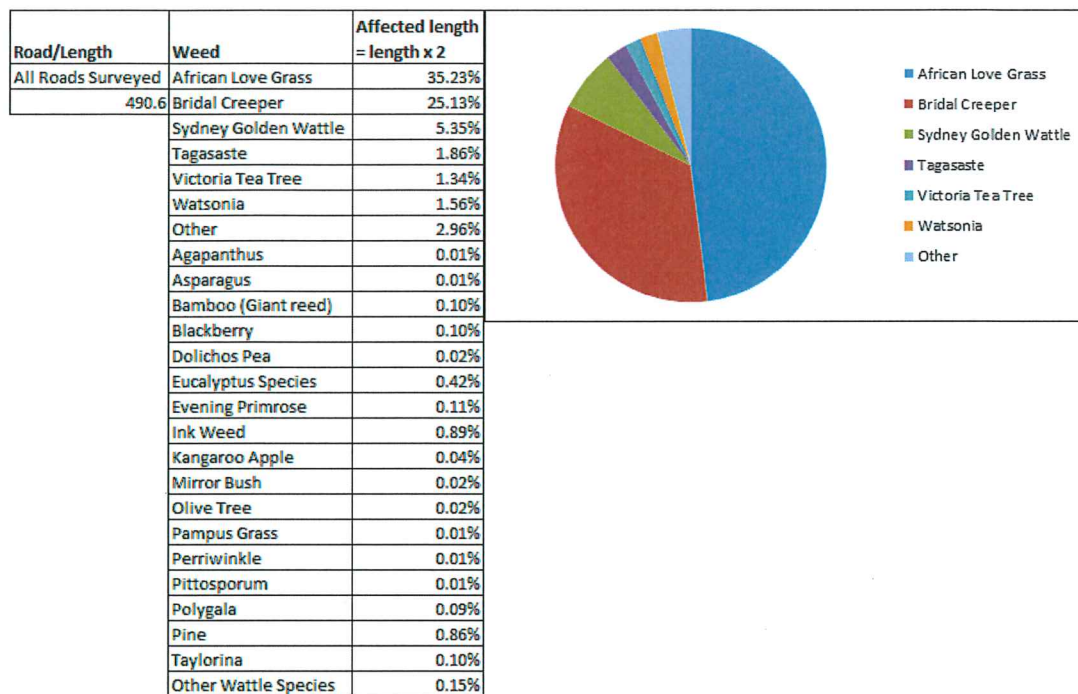




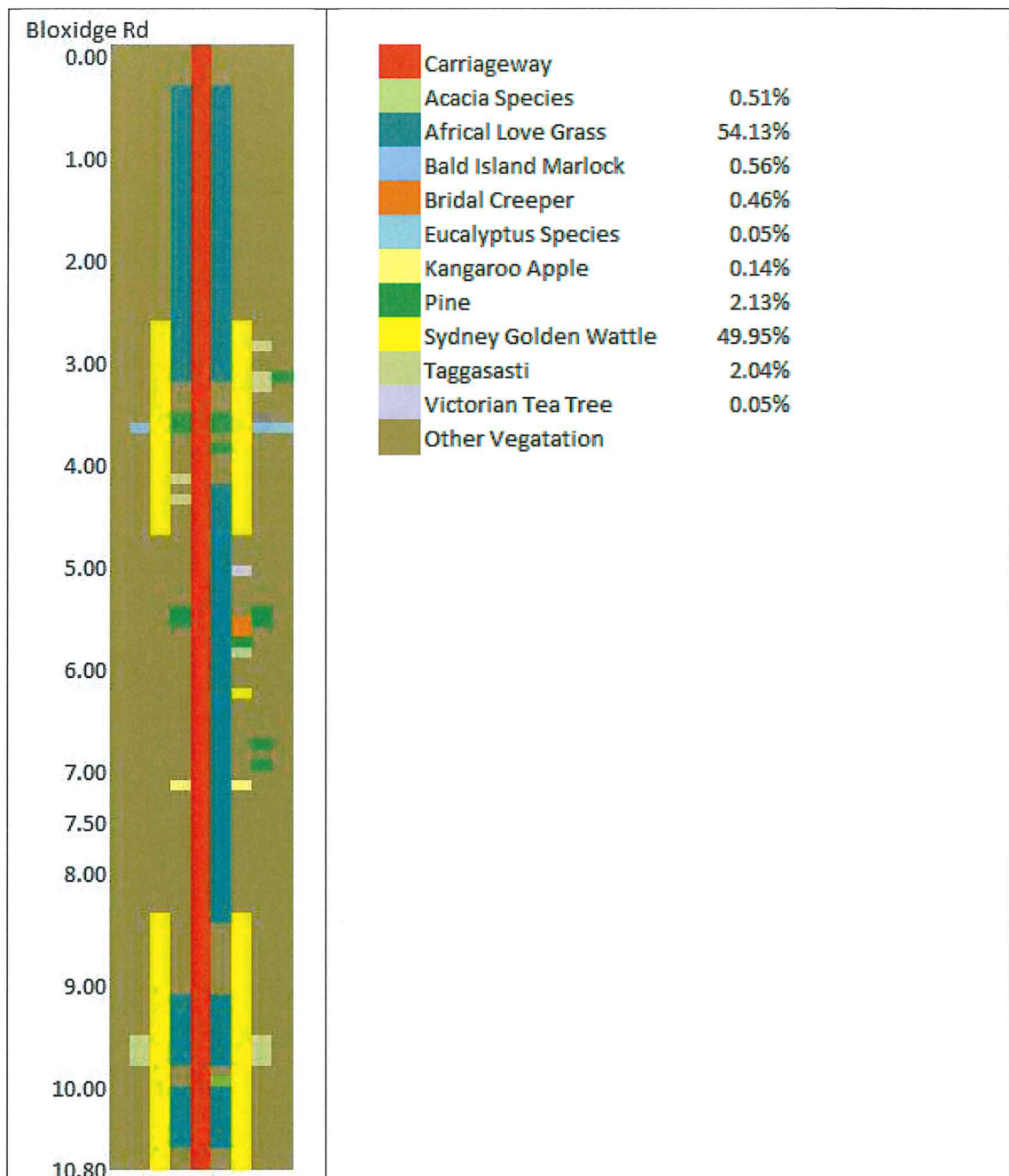




12.0 Statistics all Roads



13.0 Linear Spread



Linear spread of weeds along a 10.80 kilometre road, the other vegetation shown could be either remnant bush or areas of agricultural weeds and escaped pasture. Weeds may or may not extend from the fence line to the road edge.

14.0 Summary:

Of the 490 kilometres of roads surveyed over 410 kilometres of roads are affected by environmental weeds, equating to 980 kilometres of roadsides and over 820 kilometres affected when assessing the individual roadside.

The most prominent of these are African Love Grass with over 35% or more than 345 kilometres of roads affected followed closely by the WoNS Bridal Creeper with over 25% or 246 kilometres of roadsides affected.

15.0 Recommendations

Look for funding opportunities to assist in the control of environmental weeds. Work closely with other organisations and local governments in a concerted effort to reduce the impact of environmental weeds in the region.

With the vast amount of bushland reserves and national parks that could potentially be affected by the many environmental weeds in the area. A program devised from this report to tackle weeds in close proximity to these areas as a priority. There are still a number of WoNS species in close proximity to the Porongurup National Park despite efforts by the Shire of Plantagenet, community groups and state agencies.

There are major environmental weeds emerging in close proximity to the Stirling Range national Park with Sydney Golden Wattle and Victorian Tee Tree observed less than 8 kilometres from the southern boundary.

Educate Shire operators in roadside bio-security; establish policy around keeping machines clean when leaving problem areas to limit the spread of weeds and other pathogens such as phytophthora dieback.

Establish a spray program to compliment the grading and clearing programs. This will ensure better visibility for the road user and lessen the fuel load in the event of fire and long term will see less need for mechanical intervention.

Several roads that have large infestations of environmental weeds are registered as Flora Roads" review the status of these roads

16.0 Grant opportunities

<https://dlgc.communities.wa.gov.au/AdviceSupport/Pages/LG-Grants-Directory.aspx#k=#s=71>

<https://www.grants.gov.au/?event=public.GO.show&GOUUID=8215A102-F5FE-E8DA-6A57066D9299AC1D> - Current Grant Opportunity View - GO2828

17.0 Acknowledgements

<https://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html>

Southern Weeds and Their control By John Moore and Judy Wheeler 3rd edition

<https://www.bushlandperth.org.au/weeds/tagasaste/>

Pamphlet produced by NSW National Parks and Wildlife Service

https://www.nature.org.au/media/213734/cumberland_african-lovegrass_web_jan2016.pdf

Weed management Guide Blackberry

<https://www.environment.gov.au/biodiversity/invasive/weeds/publications/guidelines/wons/pubs/r-fruticosus.pdf>