
SUBMISSION TO:	Works
AGENDA REFERENCE:	10.1.2
SUBJECT:	Plant Replacement - Grader
LOCATION/ADDRESS:	Shire of Jerramungup
NAME OF APPLICANT:	N/A
FILE REFERENCE:	12.11.3
AUTHOR:	Graham Edwards
DISCLOSURE OF ANY INTEREST:	Nil
DATE OF REPORT:	9 July 2012

SUMMARY

The purpose of this report is to consider the replacing of two (2) graders with one (1) in the 2012 / 2013 Adopted Annual Budget.

ATTACHMENT

Nil

BACKGROUND

The Jerramungup Shire Council previously considered the replacing of two (2) graders with one (1) in March 2009.

Three (3) graders have since been retained as described below.

Grader		Purchased / Disposed	Hour Meter	
Fleet N^o	Make		March 2009	June 2012
PG1	Cat 120H	Oct 98 / May 09	13256	n/a
PG2	Volvo G710	April 2002	7150	9393
PG3	Cat 120H	Feb 2000	12050	14857
PG4	Cat 12M	May 2009	0	2973

Hour meters indicate that, over the last three (3) years Shire graders have a combined annual average use of approximately 2500 hours.

The variation between hour meters and plant allocation hours reflects required presence at the job.

The Group Operation history since 2001/02 is summarised as follows.

Year	Recorded Hours		Group Operating Costs		
	Group	Average Per Grader	Total	Hourly Rate	Costs Allocated
2001/02	1,884	628	\$112,517	\$59.74	\$96,059
2002/03	2,955	985	\$79,714	\$26.98	\$114,794
2003/04	3,020	1,007	\$128,701	\$42.62	\$104,958
2004/05	1,542	514	\$119,501	\$77.50	\$56,952
2005/06	3,313	1,104	\$175,304	\$52.91	\$166,358
2006/07	2,827	942	\$190,455	\$67.37	\$190,476
2007/08	1,690	563	\$180,822	\$107.00	\$111,430
2008/09	3429	1,143	\$189,088	\$55.15	\$212,999
2009/10	2734	911	\$159,800	\$58.45	\$163,558
2010/11	3112	1,037	\$176,876	\$56.84	\$206,187
2011/12	2689	896	\$173,131	\$64.39	\$242,526
	3604	974	\$284,456	\$78.92	\$353,851

The Group Operating Costs above are for Shire of Jerramungup graders and:

- a) Include plant operating expenses and depreciation.
- b) Exclude operator wages and overheads.

The 2011/12 figures:

- a) Firstly exclude the dry hire of a John Deere 770G, grader from 15 September 2011 to 31 May 2012, at a cost of \$111,325.
- b) Include the dry hired grader for 37 weeks of the financial year in the bottom row of the table.

The grader was new on arrival, allocated for 915 hours by the operator and returned to the supplier with an hour meter reading of 910 hours. For comparison with Shire graders the hourly dry hire rate was \$121.67.

Year	Group Hours			Minimum Hours	
	Graders	Operators	Utilisation	Operators	Utilisation
2009/10	2734	6676	41%	5928	46%
2010/11	3112	6761	46%	5928	52%
2011/12	2689	7460	36%	5928	45%
	3604	9482	38%	7311	49%

The above is indicative of:

- a) The relativity between actual hours for the graders and the same number of operators; being those who would normally operate graders.
- b) The difference if operators achieved the same grader utilisation whilst working minimum annual hours.

Road Maintenance						
Year	Distribution of Hours and Expenditure					
	2009/10		2010/11		2011/12	
Employees	6015	39%	4891	40%	5527	34%
Graders	1718	18%	1749	19%	2233	31%
Trucks	914	7%	1017	11%	1365	11%
Loaders	94	1%	537	4%	388	4%
Rollers	638	5%	256	2%	475	3%
Light Vehicles	868	3%	304	2%	238	1%
Contractors, Materials		27%		22%		16%

The maintenance for:

- a) 2009/10 includes expenditure which has now been separated as Town Services.
- b) 2010/11 and 2011/12 is for rural roads only.

CONSULTATION

The replacing of two (2) graders with one (1) was previously considered in March 2009.

COMMENT

Considerations about reducing the grader fleet from three (3) to two (2) machines are complex but a review is appropriate.

Financial Capacity

It is unlikely that grant funding, which has been a large component of the Works Programme in recent years, will continue at that level.

Once grant funding falls below a critical level either:

- a) Plant operators designated for construction will be absorbed into road maintenance for part of the financial year; or
- b) The timeframe for construction projects will be extended to accommodate the employment of plant operators at the expense of productivity.

As an indication:

Adopted Budget Road Construction Funding				
Year	Secure	Unsecure	Total	% Unsecured
2009/10	\$590,125	\$1,010,984	\$1,601,109	63%
2010/11	\$613,000	\$3,658,279	\$4,271,279	86%
2011/12	\$479,000	\$2,888,289	\$3,367,289	86%

Workforce Structure and Productivity

The greatest obstacle to high productivity is the absence of a workplace structure and the appropriate assignment of duties and responsibility, which promotes the collective and individual development of employees.

Being able to demonstrate that the Shire of Jerramungup workforce productivity is high, will also be advantageous to the community should the structural reform of local government eventuate.

Buildings aside, the current Works Department structure is:

a) Construction.

Five (5) plant operators a grader, prime mover and trailer, tandem axle truck heavy duty loader and vibratory roller

b) Rural Maintenance

Three (3) plant operators a grader, single axle heavy duty truck, medium loader and multi tyred roller.

c) Town Services

A horticulturalist, one (1) plant operator with two (2) light trucks, a skid steer loader, small ride on roller and small excavator together with several part time cleaners.

The implementation of a Works Department structure has been problematic, with establishment of the Rural Maintenance team most difficult, with dismantling through demands from construction being a primary contributor.

Consolidation and development of the Rural Maintenance team is a priority.

Grader Utilisation

Construction and Rural Maintenance each demand a permanent grader while Town Services requirements do not warrant a permanent presence.

Two (2) of the three (3) Shire of Jerramungup graders are more than ten (10) years old and due for either major repairs or replacement.

Generally, Shire of Jerramungup employees will lose approximately two (2) hours daily to travelling, plant maintenance and rest breaks.

Plant operation time is also lost to unfavourable weather, breakdown and public holidays. The objective is however to:

- a) Maintain operator hours at current levels between 90 and 100 hours per fortnight being a minimum of approximately 2350 hours annually.
- b) Pursue a utilisation ratio exceeding 60% of operator hours, being 1400 to 1500 hours per grader annually as a minimum, so that two (2) machines will achieve productivity levels similar to the current three (3) graders.
- c) Minimise breakdown through the regular replacement of the graders at approximately five (5) to six (6) year intervals.
- d) Release one (1) operator for increased utilisation of other plant.

Affordability

SIGNED BY PRESIDENT

- 14 -

15th August 2012

An amount of \$698,731 was allocated to rural maintenance in 2011/12 being an average of \$618 per kilometre of road to fund activities including:

- a) Supervision, transport and mobilisation.
- b) Unsealed and sealed road surfaces.
- c) Encroaching vegetation and weed management.
- d) Open drains, culverts and floodways.
- e) Signs, guide posts and random requests such as school bus bays.
- f) Materials and contractor support.

Funding will not accommodate all expectations and a reactive approach is counterproductive if maximum community benefit is to be achieved from limited funds.

In recent years, the Jerramungup Shire Council has invested well in plant for rural maintenance purposes. Plant is now available for a self reliant rural maintenance crew of three (3) employees with a grader, truck, loader and multi tyred roller.

At current rates and use as indicated previously this crew could:

- a) Account for approximately \$500,000 of the Rural Maintenance budget.
- b) Subject to seasonal conditions, average at least two (2) and perhaps three (3) rotations of the Shire annually.

Rural Road Maintenance Team			
Item	Operator Hours	Plant Hours	Indicative Annual Cost
Grader	2300	1400	\$220,000
Truck	2300	1400	\$160,000
Loader	900	560	\$55,000
Roller	1400	840	\$85,000
			\$510,000

The expenditure indicated assumes use of the:

- a) Loader at 40% of the truck hours.
- b) Multi tyred roller at 60% of the grader hours.

During favourable conditions, the use of a multi tyred roller on unsealed pavements greatly improves the service standard and reduces the required frequency of grading.

The roller has limited effectiveness however during extremely dry conditions and isn't required when the grader is working on drains and verges.

The remaining rural maintenance allocation of approximately \$200,000 is for materials and activities including the:

- a) Engaging of contractors during peak demand periods such as harvest and specialist activities such as the slashing of roadside vegetation.
- b) Employment of the construction team as required according to funding levels for construction.

Whether engaged for construction or maintenance, a third grader working at similar capacity would account for a similar amount.

STATUTORY REQUIREMENTS

Section 3.18 (3) of the Local Government Act 1995 states that:

"A local government is to satisfy itself that, services and facilities it provides are managed efficiently and effectively".

STRATEGIC IMPLICATIONS

The Strategic Plan 2009 – 2014 nominates:

Our Vision

The Shire of Jerramungup will provide leadership to maintain our identity by promoting social and economic development whilst embracing our unique natural environment.

Service Delivery and the Environment

The Shire of Jerramungup will deliver a range of excellent community services whilst minimising our impact on the environment by ensuring that the service delivery process is supported by appropriately skilled, qualified and enthusiastic staff members.

Building and Road Infrastructure

The Shire of Jerramungup will provide the community with quality road and building infrastructure by:

- a) *Ensuring that built infrastructure is well utilised and maintained.*
- b) *Keeping abreast of new technology and industry best practice.*

POLICY IMPLICATIONS

Nil

VOTING REQUIREMENTS

Simple Majority

RECOMMENDATION

That tenders are called for:

- a) The supply of one (1) grader.
- b) Disposal of two (2) graders, being the Caterpillar 120 and Volvo G710, by either trade or outright purchase.

OC120704 Moved Cr Parsons / Seconded Cr Daniel

That tenders are called for:

- a) **The supply of one (1) grader.**
- b) **Disposal of two (2) graders one being the Caterpillar 120 and or the Volvo G710, by either trade or outright purchase or;**
 - **disposal of one grader being the Caterpillar 120 by either trade or outright purchase.**

Carried 6-0

Reason for variation: Council has an option to dispose of just one grader being the Caterpillar 120.