



# Minutes

Operations Committee  
24<sup>th</sup> April 2017  
4.00pm

Operations Committee	
Item Number	Agenda
1	Present And Apologies
2	Declaration Of Interests
3	Confirmation Of Minutes
4	Business Arising From The Minutes
5	Dam Safety Report
6	Draft Capital Works Program – 2017/18
7	General Business
8	Next Meeting

## AGENDA – OPERATIONS COMMITTEE – 24/04/17



### ITEM 1: PRESENT AND APOLOGIES

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**PRESENT:** Clr S Lesslie, Clr W McAndrew, Clr S Ring, Clr R Thompson

**APOLOGIES:** A Muir.

**OFFICERS:** I Stewart, R Brownlow, J Edgecombe, K Cibulka

### ITEM 2: DECLARATION OF INTERESTS

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NIL

### ITEM: 3 CONFIRMATION OF THE MINUTES FROM THE PREVIOUS MEETING

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Previous minutes from meeting held on the 3<sup>rd</sup> April 2017, were presented to Council on the 10<sup>th</sup> April 2017.

### ITEM 4: BUSINESS ARISING FROM THE MINUTES

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Report on the Draft Capital Works Program which was presented at the last meeting has been reviewed and is be presented at this meeting Item 6.

### ITEM 5: DAM SAFETY REPORT

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#### SUMMARY

Council has recently received a Dam Surveillance reports for 2016 from Water NSW. These reports have been compiled following site visits by Council's Dam Engineer, and engineers from Water NSW, and provide recommendations for future works in order to to comply with the Dam Safety Committee and Australia National Committee on Large Dams standards and guidelines.

#### COMMENTARY

The reports contain recommendations from previous reports with a criticality rating for the works to be undertaken. The Lithgow Dam No.1 report for 2016 showed 22 recommendations ranging from the 2010 report to the current report. To date there are 8 completed recommendations, 12 underway and 2 not started. Lithgow Dam No.2 has 37 recommendations from 2013 until the current report with 17 been completed, 15 underway and 5 Not started. Many of the recommendations are copies from previous reports or are replications whilst many of the tasks that have not been

completed are being quoted on. The work that has not been started is reliant on other work or recommendations to be completed prior to commencement.

Detailed discussion took place in regard to the utilization of Dam No 1 and its role in providing retention of major flood flows in the event of failure of the No 2 dam and excessive storm flows. The demolition of the wall would reduce the ability to detain flood flows from the catchment and increase the likelihood of flooding downstream.

Council is awaiting various options in regard to the future of this Dam but at this stage is not proceeding with demolition of the structure. Further details will be provided to a future meeting of the Operations Committee.

## **ATTACHEMENTS**

1. List of the recommendations and their current status.

## **ACTION**

**THAT** the current status of the Lithgow Dams No.1 and No.2 as detailed in the Dam Surveillance reports be noted.

**MOVED:** Clr S Lesslie

**SECONDED:** Clr R Thompson

## **ITEM: 6      DRAFT CAPITAL WORKS PROGRAM – 2017/18**

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As discussed during the Operations Committee of the 3<sup>rd</sup> April 2017, options are available for allocation to the Urban Resealing Program for the 2017/18 financial year., Funds previously allocated to pavement renewal in Main Street are to be reallocated to their original source, being roads.

Additional options may present themselves during the course of the committee meeting. The options below are based on community feedback over the past 12 months, engineer assessment and analysis of road condition data / traffic data.

### **Option A:**

Tank Street (from Read Avenue to Railway Parade)

Bridge Street (from Railway Parade to Mort Street)

Hotmix Reseal - \$170,000.00

### **Option B:**

Hill Street (from Eskbank Street to Cook Street)

Lett Street (from Cook Street to Waratah Lane)

Two-coat Reseal - \$92,500.00

Tank Street (from Read Avenue to Railway Parade)

Hotmix Reseal - \$71,000.00

## **COMMENTARY**

Following discussions on the two proposed options for the reallocated funds, Option A was agreed as the most deserving of resealing improvements. The proposed

## RECOMMENDATION

**THAT** Council adopt the following works program for the 2017/18 financial year as per attachment.

**MOVED:** Clr R Thompson

**SECONDED:** Clr S Ring

## ITEM 7: GENERAL BUSINESS

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### SUMMARY

Welcome to Clr Thompson to the Operation Committee.

### ROADS AND DRAINAGE

The following issues were discussed:

- **Mckanes Falls Road** – Improvement works are planned for the Jenolan Caves end of this road with funds provided in 2106/17 works program
- **Road to Newnes** – Works are underway for the new bridge construction on Wolgan Road, Wolgan Valley which will facilitate access to the unsealed section of the road for major resheeting
- **Naroo Circuit** - It was noted that repair works have started at Naroo Circuit and was discussed if an option of a drain being put in place is likely.
- **Road to National Park – Glen Davis** - the road to the national park just before heading into the township of Glen Davis is in need of repair work as there is many large potholes along the length of the road. Ownership of the road is to be investigated
- **Bent Street Lithgow** – The local Taxi Company have raised some concerns to the new island that has been constructed on the merging lane from Bent Street onto Lithgow Street. It was discussed this has potential to create more accidents in that particular area. This area will be monitored once the work is complete to determine its success in reducing accidents at this location., which has been declared a blackspot in accord with RMS criteria.
- **Wolgan Street, Portland** – The footpath is in a bad state, shop owner not happy that there is bark/mulch all over the pavement and is not being cleaned regularly.
- **Curtin Place** –Future works including mains lining, smoke testing for illegal connections and relocation of sewer mains are planned which may eliminate the issue of manhole surcharge during period of heavy rain.

- **Barracks Place** – The overflow of stormwater drainage from existing drains has been investigated and alterations of gully drains into the main drainage line are defective and require replacing. It is also believed that cigarette butts from these grates are coming from the State Debt Recovery Office Parking area and it was suggested that the owners of the building be requested to place suitable containers in the smoking area.

## **SPORTING FIELDS IN PORTLAND**

The condition of Kremer Park due to a serious infestation of the black beetle was raised and every effort is being made to improve the surface of the football field Kremer Park.

The deciduous trees adjacent to the pool boundary at Portland in the Saville Park have been planned to be removed progressively during the winter months to eliminate the hazards of tree debris entering the Pool's filtration system..

## **CEMETERIES**

Clr McAndrew formally thank the Council Staff T Nolan, P Gordon and G Chew on how well kept the cemetery is at Lithgow.

## **ACTION**

**THAT** appropriate actions and reporting be undertaken in relation to the items raised during general business.

## **ITEM 8: NEXT MEETING**

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**Next Meeting:** 4.00pm on Monday, 22<sup>nd</sup> May 2017  
Committee Room, Administration Building,  
180 Mort Street LITHGOW NSW 2790

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**There being no further business the meeting closed at 4:57pm**



# Attachments

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# **Attachment 1**

**NIL**

# **Attachment 2**

**NIL**



# Attachment 3

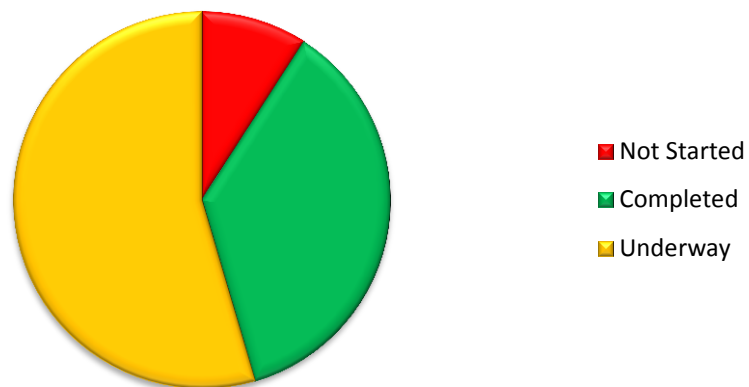
**NIL**

# **Attachment 4**

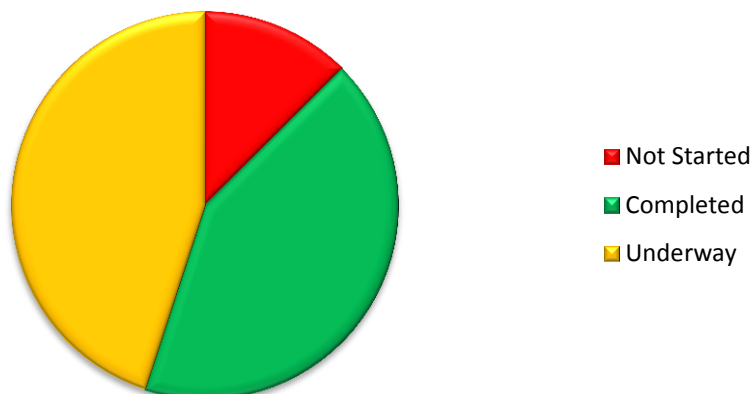
**NIL**

# Attachment 5

**Lithgow Dam No.1 Surveillance  
Report Progress**



**Lithgow Dam No.2 Surveillance  
Report Progress**



Lithgow Dam No.1

Rec No.	Recommendation	Status
2013.2	Council should arrange for a full safety review including a full updated hydrology study, finalisation of the DRAFT 2005 dambreak study, and a comprehensive risk assessment to be carried out. Note: this recommendation supersedes nos. 2010.7 and 2005.1, 3, 11.	Council wishes to discuss with Safety Committee and Water NSW potential of Demolishing Dam No.1 as it only acts as a retarding basin prior to any further studies or reviews be undertaken. Quotes are being collected to undertake this study.
2013.3	Develop a flood frequency curve including inflow/outflow hydrographs for the 1 in 50 and 1 in 100 AEP floods based on PMPs derived from the Bureau of Meteorology's GSDM. Use this data in the requisite updating of the Dam Safety Emergency Plan.	Same as 2013.2
2013.4	Determine the Incremental Potential Loss of Life (PLL) for the dam to conclusively determine the Consequence Category.	Same as 2013.2
2013.5	Update the DSEP annually and arrange for testing of the DSEP in conjunction with testing of the Lithgow No 2 dam DSEP testing at five yearly intervals.	DSEP being reviewed by GHD
2013.6	Carry out a security evaluation of the dam.	Completed
2010.01	Engage a dam specialist to increase the inlet /outlet capacity through the base of the dam to pass the 1% AEP flood at full supply level and report on the condition of the structure to meet the outstanding PRA recommendation.	Quotes received for works however same as 2013.2
2010.2	Remove debris, trees and large shrubby bushes adjacent to the upstream face at least 20 meters and from downstream right abutment and near the scour valve outlet.	Completed and Ongoing
2010.3	Undertake interim repair of the left abutment erosion.	Collecting quotes
2010.4	Establish and maintain a photographic record database to monitor and record the cracks and defects and the condition of both faces.	CEH conduct aerial surveys of both Dam 1 and Dam 2 using Drone
2010.5	Record the result of routine inspections of the dam on a pro-forma 'tick sheet'.	Records kept of inspections monthly
2010.6	Obtain DSC endorsement for "monthly" inspection regime for the dam.	Completed
2010.7	Arrange a rigorous assessment of the earthquake capacity to quantitatively determine whether the dam is capable of withstanding appropriate earth quake loads.	Same as 2013.2
2010.9	Prepare a simplified O&M Manual to formally document procedures in respect to Operation	To be completed

	and Maintenance of the dam as recommended by previous Inspection reports.	
2010.10	Update the current DSEP to the latest guidelines.	DSEP being reviewed by GHD
2010.11	Provide safe access around the dam for Council staff to undertake routine inspections and maintenance of the dam.	Clearing completed and handrail to be investigated
2010.12	Arrange an OH&S Audit to identify deficiencies and any modifications to the structure or security system required.	Completed
2013.3	Address all the outstanding recommendation from the 2002 SMEC Portfolio Risk Assessment (PRA) and previous inspection reports.	Quotes being collected to undertake a full safety review
2014.1	Any sudden or inexplicable change in the condition of the dam should be reported immediately to the Lithgow City Council's Water Engineer/Manager and to WaterNSW (formerly State Water) for assessment.	Surveyed 6 monthly by CEH and 3 monthly inspections by operators.
2014.2	In updating the DSEP as recommended in the 2013 5-Yearly Surveillance Report (see Recommendation (2013.5), the updated DSEP should reflect that the WaterNSW (formerly State Water) is now Lithgow City Council's dams engineer and should be the second point of contact after the SES in an alert or emergency situation.	Being reviewed by GHD
2014.3	Council either install a water level recorder at the dam with telemetry to Council's head office to allow warnings to be appropriately triggered OR, submit a written justification to the DSC for using the Lithgow 2 water level recorder (when installed) as providing warning triggers for floods at Lithgow 1 dam, given all of the various associated unknowns and anomalies associated therewith.	Telemetry upgrade to include Dam telemetry for Council.
2014.4	Council is to attend to the recommendations outlined in the DEUS (previously the DLWC) letter of 28 October 2002, attached to the Lithgow No. 1 Dam Risk Assessment Report as a matter of utmost urgency.	To be completed
2015.1	Any new personnel attend an approved training course (it is understood that Council's new Relief Operator, Mr Laurin Shirt and Council's new Water and Wastewater Manager, Ms Maddison Bailey have not attended such training), and all	Laurin Shirt completed Safety Course in 2015. Maddison Bailey is no longer employed by Lithgow City Council Matthew Trapp to be trained and Phil

	other personnel who are involved with the inspection and operation and maintenance of the dam, attend refresher courses at 5 year intervals.	Kellond to attend refresher course.
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#### Lithgow Dam No.2

Rec No.	Recommendation	Status
2013.1	Dewater and inspect the toe dissipater plunge pool when conditions allow, and when all relevant WHS items have been satisfactorily addressed, to determine the condition of the pool and dam toe area.	WHS access nearly complete. Work can be undertaken by staff soon
2013.2	Carry out a condition assessment on the dam's outlet works and scour system. Undertake the appropriate remedial works to the scour and outlet systems resulting from recommendations of the condition assessment. Once the scour system has been repaired, exercise the scour valve on a regular basis (at least once a year) to ensure proper operation.	WHS measures to be installed prior to inspections. Currently investigating works to be undertaken.
2013.3	Install an automatic storage level recorder (telemetry system) at the dam with alarms which annunciate, at a continually manned control point or connected pager system, if there is a rapid rise or fall in reservoir level. Incorporate the system into the requisite Dams Safety Emergency Plan (DSEP).	To be installed as a part of telemetry rollout.
2013.4	Install a rainfall measuring gauge on site to measure rainfall activity at the dam. Unless the rainfall gauge at the Clarence Colliery is within the dam's catchment.	To be installed as a part of telemetry rollout.
2013.5	Install seepage measurement weirs on the downstream toe and at key locations on the right and left abutments to measure seepages at these locations. Telemetry of the seepage to a continually manned control point or connected pager system, if there is a rapid rise or fall in reservoir level. Incorporate the system into the requisite Dams Safety Emergency Plan (DSEP).	To be installed as a part of telemetry rollout.
2013.6	Develop an Operation and Maintenance Manual in accordance with the requirements of the ANCOLD guidelines and the DSC's requirements.	Currently being developed.
2013.7	Liase with the SES to upgrade their Flood Emergency Plan to include coverage of a	Completed

	dambreak event.	
2013.8	Update the current DSEP annually, including substituting a nominated dam specialist where reference is made to the former DWE or NOW divisions, branch and personnel in the text, flow charts and responsibilities and communications directories.	DSEP complete being reviewed by GHD
2013.9	Carry out an occupational health and safety audit on all aspects of the routine inspections, operation and maintenance of the dam including any public safety issues, in accordance with the requirements of the NSW Work Health and Safety Act 2011.	Completed
2013.10	Council should seek the DSC's advice on what spillway capacity is acceptable due to revised PMP Design Flood.	Completed
2013.11	(Council) sign off the inspection form.	Completed and Ongoing
2013.12	Remove the trees and shrubs from the upstream left abutment to allow an unobstructed view of the face and crest during routine inspections.	Completed and ongoing
2013.13	Thoroughly inspect the upstream face of the dam when water levels permit and take an adequate number of photos for future records, and carry out any remedial works as required.	Underwater drone survey being investigated through Abyss Solutions. Trial to be undertaken in May.
2013.14	Establish a photographic record database of the structure comprising a series of photos from the same point, regularly taken every six months (summer and winter) to monitor the cracks and record the condition of the downstream faces.	CEH currently completes 6 monthly using drone.
2013.19	Re-assess the Dam Stability Analysis due to the revised PMP Design Flood Level.	Completed
2013.20	Carry out a security evaluation of the dam.	Completed
2013.21	Carry out a full Work Health and Safety Audit of the dam in accordance with the WH&S Act 2011, and implement the findings.	Completed
2013.22	Determine the dam's capacity to withstand the newly found peak flood. This will need to be based on a non-linear dynamic analysis using material parameters found by laboratory testing of core samples of the dam, the foundations and the abutments	Being reviewed by GHD
2013.23	Carry out an Incremental Potential Loss of Life study to conclusively determine the consequence category of the dam.	To be completed
2013.24	Carry out a nonlinear dynamic analysis (on the same basis as Rec. 22) for the latest earthquake loading.	To be completed
2013.25	Re-evaluate the 1995 Seismic Loadings to	To be completed

	determine if they are still applicable for Rec. 24.	
2013.26	Carry out a diver's inspection of the upstream face.	Underwater drone survey being investigated through Abyss Solutions. Trial to be undertaken in May.
2013.27	Install WHS compliant access to the right abutment and toe area to allow detailed inspections to occur. If totally impractical, ensure both abutments and toe areas are inspected from relevant vantage points by binoculars or similar.	Nearing Completion of access to toe of the dam. Handrail currently collecting quotes.
2013.1	Repair the concrete over the exposed steel beam on the outlet control platform and the defect at junction of the arch and right hand buttress section of the dam.	Completed
2013.2	To assist with the inspection of both the upstream and downstream faces clear the sight lines from the abutments of all vegetation, shrubs and dead eucalypt growth.	Completed and ongoing
2013.3	Rehabilitate the steps down the right abutment to provide access to the plunge pool and scour valve to comply with WHS legislation.	Nearing completion
2013.4i	Check and repair the steel work and timber decking of the operating platform and overhaul the winch.	To be done as a part of the WHS equipment including walkway to be installed.
2013.4ii	Check the behaviour of the outlet and stabilise if movement, deflection or vibration are excessive under operating conditions.	To be completed. Nothing changing currently
2013.5	(i) Install a telemetry system to record storage level. (ii) Install a seepage weir in the plunge pool and connect to the telemetry system to monitor flow. (iii) Install an automatic rain gauge at the dam and connect to the telemetry system. (iv) Install a control network of fixed pillars on the abutments to site the camera and photograph the various defects at six monthly intervals (i.e. Summer/winter) or if there is a significant change in the reservoir level or following a seismic event. <b>Note:</b> The telemetry system to automatically and continuously transfer all data to a permanently manned location or pager network.	To be installed as part of telemetry rollout.
2013.6	Determine the annual seepage flow and carryout chemical analysis of both seepage water and stored water annually to measure	To be determined following the installation of dam toe access.



	calcium-iron difference to estimate the annual loss of cementitious material.	
2013.7	Review ALL current security arrangements (gates hand rails signage) around and onto the structure to prevent the general public accessing the crest from either the abutments or when the reservoir is approaching FSL by swimming or by canoe/boat.	Completed currently investigation implementation of security measures.
2014.1	The reservoir rim be inspected annually, Particularly if underground mining is approaching the storage.	Inspected annually.
2014.2	Any sudden or inexplicable change in the condition of the dam should be reported immediately to the Lithgow City Council's Water Engineer/Manager and to WaterNSW (State Water) dam engineers for assessment.	Ongoing no changes as yet. Changes to be reported as a part of inspections
2014.3	In future, a copy of all groundwater monitoring results should be forwarded to State Water every 3 months for their record. Any sudden or inexplicable change in the result should be reported immediately to Lithgow City Council's Water Engineer/Manager and to State Water Dam Engineers for assessment.	Can be found on Centennial Coal Website for Clarence colliery.
2014.4	In future, a copy of all deformation survey results should be forwarded to State Water every 3 months for their record. Any sudden or inexplicable change in the result should be reported immediately to Lithgow City Council's Water Engineer/Manager and to State Water Dam Engineers for assessment.	Ongoing no changes as yet. Changes to be reported as a part of inspections
2014.5	The updated DSEP should at least reflect that the WaterNSW (formerly State Water) is now Lithgow City Council's Dams Engineer and should be the second point of contact after the SES in an alert situation or emergency situation.	Completed being reviewed by GHD
2015.1	Any new personnel attend an approved training course (it is understood that Council's new Relief Operator, Mr Laurin Shirt and Council's new Water and Wastewater Manager, Ms Maddison Bailey have not attended such training), and all other personnel who are involved with the inspection and operation and maintenance of the dam, attend refresher courses at 5 year intervals.	Laurin Shirt completed Safety Course in 2015. Maddison Bailey is no longer employed by Lithgow City Council, Matthew Trapp to be trained and Phil Kellond to attend refresher course.

# Attachment 6

## Capital Works Program 2017/18

Main Program	Sub-Program	Section	Type of Work	Surface Type	Length of Work (m)	Budget
						<b>\$ 200,000.00</b>
Urban Resealing						
	Bridge Street, Lithgow	Railway Parade to Mort Street	Reseal	Hotmix	350	\$ 200,000.00
	Tank Street, Lithgow	Read Avenue to Railway Parade	Reseal	Hotmix		
	Total					<b>\$ 200,000.00</b>
						<b>\$ 1,117,608.00</b>
Roads to Recovery						
	Glen Alice Road, Glen Alice	End of 2016/17 works	Reseal	Two-coat	2,500	\$ 367,608.00
	Magpie Hollow Road, Lithgow	End of 2015/16 works	Reseal	Two-coat	800	\$ 120,000.00
	Curly Dick Road, Lithgow	End of 2016/17 works	New seal	Two-coat	2,500	\$ 367,608.00
	Clarence Pirie Park Road, Capertee	Castlereagh Highway	New seal	Hotmix	127	\$ 110,000.00
	Donald Street, Lithgow	Tank Street to Bennett Street	Reseal	Hotmix	279	\$ 152,392.00
	Total					<b>\$ 1,117,608.00</b>
						<b>\$ 406,318.66</b>
ILP - Roads						
	Cripps Avenue, Wallerawang	Pindari Place to Heel Street	Reseal	Two-coat	253	\$ 50,000.00
	Carlton Road, Portland	Section around Albion Road	New seal	Two-coat	410	\$ 50,000.00
	Lyon Parade & Hume Avenue, Wallerawang	Barton Avenue to Hume Avenue & Lyon Parade to Lidsdale Street	Select Reseal	Hotmix	328	\$ 81,318.66
	Cullenbenbong Road, Kanimbla	324 Cullenbenbong Road - Ray Hadley	Reseal	Two-coat	350	\$ 50,000.00
	Ellen Close, Portland	End of Ellen Close	Reseal	Hotmix	40	\$ 40,000.00
	Valley Drive, Lithgow	Kirkland Link to Cooper Close	Reseal	Hotmix	116	\$ 50,000.00
	Brays Lane, Wallerawang	Pipers Flat Road to Blackberry Lane	Reseal	Hotmix	190	\$ 65,000.00
	Ivatt Street Lane, Lithgow	Sandford Avenue to Ivatt Street	New seal	Two-coat	150	\$ 20,000.00
	Tank / Union Lane, Lithgow	Inch / Gay Lane to End	Reseal	Two-coat	240	\$ 20,000.00
	Total					<b>\$ 406,318.66</b>
						<b>\$ 90,000.00</b>
ILP - Lane Improvements						
	Williwa Lane (CBD), Portland	Lett Street to Tramway Avenue	Reseal	Two-coat	96	\$ 12,000.00
	Jamison / High Lane, Portland	Lidsdale Street to Limestone Street	New seal	Two-coat	182	\$ 15,000.00
	Langbein Lane, Portland	Union Street to Limestone Creek Road	New seal	Two-coat	260	\$ 25,000.00
	Bate / Piper Lane, Portland	Saville Street to Paine Street	New seal	Two-coat	182	\$ 19,000.00
	Falnash / Ilford Lane, Portland	Portland / Sunny Corner Rd to Green St	New seal	Two-coat	196	\$ 19,000.00
	Total					<b>\$ 90,000.00</b>
						<b>\$ 260,000.00</b>
Rural Road Improvements						
	Palmers Oakey Road	902 Palmers Oakey Road to 'Bingletree' 1616 Palmers Oakey Road	Gravel reconstruction	Gravel unsealed	5,000	\$ 260,000.00
	Total					<b>\$ 260,000.00</b>
						<b>\$ 150,000.00</b>
Rural Roads Gravel Resheeting						
	Old Western Road, Rydal	Sydney Road to last property	Gravel reconstruction	Gravel unsealed	1,600	\$ 150,000.00

	Total									\$ 150,000.00
<i>Kerb and Gutter Construction</i>										\$ 20,000.00
	Allocate to Main Street footpath									\$ 20,000.00
	Total									\$ 20,000.00
<i>Footpath Construction</i>										\$ 103,783.00
	Main Street Footpath									\$ 103,783.00
	Total									\$ 103,783.00
<i>Urban Drainage Improvements</i>										\$ 50,000.00
	Main Street, Lithgow	Cupro Street to Laurence Street	New inlets	New inlets	x					\$ 50,000.00
	Total									\$ 50,000.00
<i>Guardrail Installation</i>										\$ 33,000.00
	Allocate to Main Street footpath									\$ 33,000.00
	Total									\$ 33,000.00
<i>Depot Improvements</i>										\$ 50,000.00
	Wallerawang Depot Seal									
	Lithgow Stockpile Shed									
	Total									\$ -
<i>Farmers Creek Stage 3 Footpath</i>										\$ 70,000.00
<i>Bus Shelters</i>										\$ 15,000.00
<i>Timber Bridge Improvements</i>	Glen Davis Road, Capertee Valley (Coco,									\$ 100,000.00
<i>Bicycle Plan Review</i>	Crown and Airlie Creek Bridges)									\$ 10,000.00

# Attachment 7

**NIL**

# Attachment 8

**NIL**