

GENERAL PURPOSE COMMITTEE

SECTION 2 INFRASTRUCTURE

GENERAL PURPOSE COMMITTEE - INFRASTRUCTURE

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GENERAL PURPOSE COMMITTEE - INFRASTRUCTURE

Meeting Date: **31 May 1994**

Item: **2**

ITEM 2: ECO-SAFE WASTEWATER TREATMENT PROJECT - ENVIRO-
DESIGN TECHNOLOGY PTY LTD

FILE NUMBER: GW020/007 PT02/ENG

REPORT:

A report was considered by Council at a Special Meeting on 3rd May, 1994, regarding the ongoing testing of a pilot treatment plant. It was indicated that funding was likely from Public Works and the Department of Primary Industry & Energy, and Council resolved to contribute \$28,666.00 on a : : basis. Advice has now been received that Public Works will not be contributing to the project.

It does appear that Public Works supports the proposal, however, funding for a pilot treatment plant evidently cannot be justified from the Country Town Water Supply and Sewerage Programme. At this stage, funding for fifty percent of the project ie; \$43,000 is still available from the Department of Primary Industry & Energy from the National Landcare Programme.

If this project is to continue and receive Federal funding it will be necessary for Council to contribute fifty percent of the cost of \$86,000 ie; \$43,000 rather than one third of the cost as was indicated in the previous report, ie; \$28,666.

It is still felt that the project is worthy of support through the next stage, particularly in view of the Company's profit sharing offer.

RECOMMENDATION:

That Council continue to support the development of the Eco-Safe Waste Water Treatment Project with Council's proportion of the funding being provided from the Sewerage Fund. An agreement being completed between the Company and Council whereby the Company agrees to pay 2% (two) of profits to Council from sales until the \$200,000 (two hundred thousand dollars) is paid. If the Company is sold or changes ownership, the \$200,000 (two hundred thousand dollars) be paid to Council. The Seal of Council be placed on any necessary documents.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E01

**** END OF ITEM 2 ****

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ITEM 3: BELLS LINE OF ROAD, NORTH RICHMOND - KERB & GUTTER, ROAD SHOULDER & DRAINAGE WORKS - ROADS & TRAFFIC AUTHORITY

FILE NUMBER: 0243/R PT04/ENG

REPORT:

Correspondence has been received from the Roads & Traffic Authority requesting consideration be given to completing the roadworks between the new service station/ Hanna Match and the North Richmond Bridge.

The works involve kerbing and guttering, drainage and shoulder construction off the north western end of the North Richmond bridge.

Details of the proposed work and associated costs showing the cost sharing arrangement between Council and the RTA is as follows:-

Details		Estimate	
		Council	RTA
1	Kerb & Gutter length 200m	6,600	6,600
2(a)	Drainage length 57m	2,500	7,800
2(b)	Drainage pits x 4	800	2,400
3	Erosion control turfing	100	200
4(a)	Shoulder reconstruction 300m ² (base)	-	11,600
4(b)	A.C. wearing surface (50mm)	-	3,900
Total		10,000	32,500

It is proposed that Council's proportion of the funding (\$10,000) be provided from the Kerb and Gutter Reserve.

A condition of the RTA's funding offer is that the works have to be completed by the end of June, 1994, and as such, it is proposed to commence the work as soon as possible, following the Committee Meeting, should Council wish to proceed.

RECOMMENDATION:

That the construction of kerb, gutter, drainage and road shoulder on Bells Line of Road between the North Richmond Bridge and the Service Station/Hanna Match proceed at an estimated cost of \$42,500 (forty two thousand five hundred dollars) with Council's share \$10,000 (ten thousand dollars) provided from the Kerb and Gutter Reserve.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E02

****** END OF ITEM 3 ******

ITEM 4: NIGHTINGALE SQUARE, GLOSSODIA - ADDITIONAL ROADWORKS

FILE NUMBER: 1402/R PT02/ENG

REPORT:

Part of the 1993 Works Program provides for the construction of kerb and gutter and adjacent roadworks in Nightingale Square, Glossodia.

The kerb and guttering has been completed, however, it has now been found that the existing sealed pavement will need to be regraded so as to provide for a uniform crossfall to the gutter. When the original cost of the job was estimated, it was anticipated that only the shoulder area would require reconstruction.

RECOMMENDATION:

That the additional pavement works in Nightingale Square, Glossodia, be undertaken to form a uniform grade at an estimated cost of \$26,000 (twenty six thousand dollars) with the funding being provided from Road Construction Reserve.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E03

****** END OF ITEM 4 ******

ITEM 5: THE DRIFTWAY - RECONSTRUCTION**FILE NUMBER:** 2018/R PT04/ENG

REPORT:

As Council would be aware, reconstruction of The Driftway has been undertaken in two stages thus far. Stage I being between Reynolds Road and Londonderry Road and Stage II between Londonderry Road and Bonner Road. This work has now been completed. Funding for the project was on a 2:1:1 basis, with \$330,000 being provided from a Financial Assistance Grant, \$165,000 by Penrith City Council and \$165,000 from this Council, making a total budget of \$660,000.

The project has been completed under budget with an amount of approximately \$175,000 remaining from the total funding. It is proposed that these funds be utilised to complete the reconstruction of The Driftway between Bonner Road and Castlereagh Road, a length of approximately 900 metres. Penrith City Council was advised of this proposal, and that Council has in turn advised that it has no objection to the remaining funds being utilised for the reconstruction of The Driftway between Castlereagh Road and Bonner Road, on the basis that Hawkesbury City Council agree to contribute half cost of the sealing of Bonner Road between The Driftway and Eaton Street in the 1994/95 Works Program.

The estimated cost to reconstruct and seal Bonner Road, which is approximately 650 metres long, is \$85,000 with Council's contribution being \$42,500. Whilst Council's policy is not to extend the sealed road network without mitigating circumstances, it is felt that this proposal is reasonable on the basis of the fifty percent funding by Penrith City Council, the continued representation by residents fronting that road and the fact that Bonner Road is a bus route.

It will also be noted from the plan that there is a short section of Eaton Street between Bonner Road and Warnock Street, of approximately 150 metres, which links those two streets that is also unsealed. It is considered that it would be prudent to seal this short section of road, as it too is part of the bus route. The estimated cost to undertake this work is \$18,000.

RECOMMENDATION:

1. That the reconstruction and bitumen sealing of The Driftway between Bonner Road and Castlereagh Road be completed using funds provided for The Driftway reconstruction.
2. That Bonner Road be reconstructed and bitumen sealed on a 50/50 (fifty/fifty) basis between Penrith and Hawkesbury City Councils at an estimated cost of \$85,000 (eighty five thousand dollars), with this Council's contribution of \$42,500 (forty two thousand five hundred dollars) being included in the 1994/95 Construction Program.
3. That Eaton Street between Bonner Road and Warnock Street be reconstructed and bitumen sealed at an estimated cost of \$18,000 (eighteen thousand dollars) as part of the 1994/95 Roads Construction Program.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E04

****** END OF ITEM 5 ******

ITEM 6: WASTEWATER TREATMENT - THE CITY FOREST GROUP**FILE NUMBER:** GW010/007 PT02/ENG

REPORT:

A report was submitted to Council at the General Purpose Committee of 2nd November, 1993, regarding a proposal which had been received from a group called the City Forest Group to test and develop a concept which aims to provide tertiary treatment for urban waste water, using forest type trees from specially created areas of deep forest soil. Council resolved that the project be supported in principle and assistance be given in the location of suitable sites.

The Group has now submitted a project proposal which is envisaged to be undertaken on a parcel of land adjoining the McGraths Hill Sewage Treatment Plant from which secondary treated sewage is to be conducted to a proposed holding dam constructed on the project site.

The project is to consist of two plots of approximately one hectare each; one to be treated with Yeomans Deep Soil procedures and the other to serve as a control, treated with the best forestry practice for growing trees. Each plot is to be subdivided into nine or twelve sub plots, to allow for three replicates each of three of four variable samplings or treatments.

The pilot project is planned to last for approximately twelve months, however, if results are promising, a continuation of the project for another two years is proposed. The Group has made a submission to Public Works for funding under the Landcare Program, which for the first twelve months is estimated to cost \$258,000. The funding ratio proposed is Landcare Grant \$86,000, Public Works \$86,000, City Forest Group \$43,000 and Hawkesbury City Council \$43,000. Advice from Public Works is that the project has been listed for funding consideration in the 1994/95 Financial Year.

RECOMMENDATION:

That Council continue to support the project in principle and further consideration to funding of the project be deferred until Public Works has determined its 1994/95 Funding Program.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E05

****** END OF ITEM 6 ******

ITEM 7: TRADE WASTE DISCHARGE - BLACKMAN CRESCENT & FAIREY ROAD, SOUTH WINDSOR - WORTH OIL RECYCLING PTY LTD**FILE NUMBER:** GL077/001 PT01/ENG**REPORT:**

An application has been received from Worth Oil Recycling Pty Ltd to enter into a formal Service Agreement with regard to their liquid trade waste discharge to the local sewer system.

Worth Oil's latest Interim Agreement has been in place since Council's resolution of 9 November 1993, which reads as follows and is due to expire on 30 June 1994:-

- "1. The Interim Agreement with Worth Oil Recycling Pty Ltd to discharge Liquid Trade Waste from the premises at the corner of Blackman Crescent and Fairey Road, South Windsor, be extended for a period ending 30th June, 1994, subject to the following conditions:-

- . Max. discharge per day 25,000l
(twenty five thousand)
- Max. weekly discharge 100,000l
(one hundred thousand)
- pH 7.0 - 9.0
(seven point zero) - (nine point zero)
- Mineral oil Less than 0.1mg/l
(zero point one)
- Petroleum Hydrocarbons 5mg/l
(five)
- Total Phenols 8mg/l
(eight)
- BOD 1155mg/l
(one thousand one hundred and fifty five)
- Suspended Solids 30mg/l
(thirty)
- Grease and Oil 10mg/l
(ten)
- . Payment of fees covering the discharge of Volume, BOD and Total Phenols at the following rates:-
 - volume \$ 1.00/kl
(one)
 - BOD \$ 1.42/kg
(one dollar forty two cents)
 - Total Phenols \$37.47/kg
(thirty seven dollars forty seven cents)

with fees being paid on a monthly basis.

- . *Ongoing testing as directed by Council staff to determine levels of contaminants, including metals with the total cost being met by Worth Oil Recycling Pty Ltd.*
- . *Further extension being subject to reapplication and consideration of the operating capacity of the South Windsor STP at the time, discharge volume proposed from Worth Oil and the company's pollution reduction program.*

2. *Council supports the applicant's total re-use philosophy of wastewater."*

During this time, they have produced a quality effluent within the prescribed standards as set out in the Interim Agreement for the period ending 30 June 1994. The current average, and maximum pollutant loads and the licence limits are set out in the following table:-

	Average Concentration mg/L	Maximum Concentration mg/L	Licence Limits mg/L
Maximum daily discharge			25,000L
Maximum weekly discharge			100,000L
pH	8.02	9.64	7-9
Suspended Solids	5	24	30
BOD	654	910	1155
Grease	2.05	8	10
Petroleum Hydrocarbons	1.36	3.6	5
Total Phenols	1.75	4.2	8
Mineral Oil	<0.1	<0.1	<0.1

The company has requested testing for the mineral oil component of the Total Petroleum Hydrocarbons Analysis be not required. As one of their primary functions is the recover of mineral oil, they believe they have demonstrated that mineral oils will not pass through their filtration system. However, as mineral oil recovery is one of their primary functions it is in Council's and the public interest the monitoring of mineral oil be continued for the time being and reviewed in twelve months.

It has also been requested that discharge to the sewer upon sighting the test results for each batch with the exception of BOD₅ be allowed. The turn around time for BOD is seven to ten days and it is claimed that the delay severely restricts their treatment capacity. BOD will still be tested to ensure filtration procedures are operating satisfactorily.

Presently the company is carrying out an in-house TOC (Total Organic Carbon) Analysis on all treated wastewaters and have determined a BOD:TOC ratio of 1 to 2.5 : 1. This ratio and other factors are used to determine whether a batch is to be retained for discharge or transported off the premises for discharge at their Girraween facility. In addition, it is planned

to start COD (Chemical Oxygen Demand) Analysis to establish a correlation between BOD, COD and TOC. In view of the testing being undertaken, it is recommended that approval to discharge prior to BOD results being available with the understanding if the limits are breached, previous arrangements will be introduced. This will also be subject to an annual review.

Worth Oil has indicated their pollution reduction program will consist of a minimum 10% reduction/annum of BOD. The current BOD limit is 1155mg/L and this will be reduced by 10% to 1040mg/L for the period beginning 1 July 1994. All other pollutants comply with adopted standards. These limits will be subject to annual review.

As a result of Worth Oil's total reuse of wastewater philosophy, proposed wastewater continues to replace townwater wherever possible. Regular reuse of this water has been instigated in the following areas:-

truck washdown and cleanout (approximately 10,000l/week); and

laundry process in the recycling of used fuel oils (approximately 8,000l/week).

In the last six months the company has completed further research into on-site reuse options. Further upgrading work, presently under construction and proposed at the plant will incorporate the utilisation of processed wastewater in the following areas:-

chemical makeup water for water treatment plant processes (estimated at 4,000l/week by August 1994);

general washdown of bunded areas (estimated at 5,000l/week by October 1994);

chemical makeup water for specific treatment of lubricating oils (estimated at 20,000l/week by January 1995); and

internal irrigation of lawns and garden beds (estimated at 2,000l/week by January 1995).

It is proposed that Council enter into a Service Agreement with Worth Oil subject to compliance with the following Schedules:-

Schedule One: Waste Description

The following pollutants will continue to be monitored and reported:-

	<u>Limit</u>
BOD	1040mg/L
Suspended Solids	30mg/L
Grease	10mg/L
Petroleum Hydrocarbons	5mg/L
Total Phenols	8mg/L
Mineral Oil	less than 0.1mg/L
pH	7-9

Schedule Two: Sampling, Analysis and Discharge

Discharge volumes are limited to 25,000l/day and 100,000l/week.

Discharge rate is limited to 1l/sec.

Sampling and analysis on pollutants listed in Schedule One are to continue on a batch basis.

Schedule Three: Rates and Charges

The following pollutants will be levied at the proposed rates for total discharge:-

Volume	\$1.00/kl
BOD	\$1.35/kg
Phenols	\$37.47/kg

The rates will be subject to annual review.

Schedule Four: Apparatus & Equipment

List of apparatus and equipment on-site.

Schedule Five: Special Conditions of Agreement

Discharge is allowed prior to sighting a BOD test result, providing a TOC result is recorded. Any batch recording a TOC level greater than 416mg/L be held until a BOD test result has been sighted prior to discharge and complies with the maximum limit or be transported from the premises and disposed of in a satisfactory manner. Any breach will result in reintroduction and to the previous arrangement of reporting BOD results prior to discharge.

BOD limits be reduced to:-

1040mg/L for the period July 1994 to June 1995; and
936mg/L for the period July 1995 to June 1996.

Testing for mineral oil content in the wastewater be continued for a minimum twelve months, and subject to satisfactory results, this test be not required.

The proposed reduction of wastewater discharged to the sewer be reduced by approximately 40,000l per week by June 1995.

A report be submitted in June 1995, to Council for information, including the status of the following points:-

the testing for mineral oil content in the treated wastewater;
the correlation of BOD, COD and TOC;
pollution reduction program; and
wastewater reuse.

Current and proposed reuse of water by the above will result in a reduction of approximately 40,000l/week of treated wastewater being discharged to the sewer by January 1995.

RECOMMENDATION:

That Council enter into a Service Agreement with Worth Oil Recycling Pty Ltd to discharge liquid trade waste from the premises at Blackman Crescent and Fairey Road, South Windsor, for the period starting 1 July 1994, and ending 30 June 1996, subject to compliance with Schedule One to Five as outlined in the report.

ATTACHMENTS:

There are no supporting documents for this report.

FN:IN531NBX.E06

****** END OF ITEM 7 ******