



PLANNING AND ENVIRONMENT

Public Excluded

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Report to the Utility Services Committee
from John L Morrison, Engineering Consultancy Manager

Waterloo Water Treatment Plant : Variable Speed Drives and Motors

1. Purpose

To gain additional payment authority for the purchase of three variable speed AC drives and motors.

2. Exclusion of the Public

Grounds for exclusion of the public under section 48(1) of the Local Government Official Information and Meetings Act 1987 are:

That the public conduct of the whole or relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist, i. e. ; commercial negotiations.

3. Background

Report PE-98.84 was considered at the Utility Services Committee meeting on 24 March 1998. The recommendation that an order for these units be placed for Vectron Industries Ltd to the value of \$481,321 was adopted. Additional authority was also approved for expenditure of \$15,000 on bearing filter equipment, should it be necessary, and an additional five percent to allow for currency fluctuations.

4. Progress to Date

The order consists of two parts:

4.1 **Motors**

The three large specialist AC motors were manufactured in Germany. There was a considerable delay in the manufacturing process, with subcontractor default and a plant closed down while a safety inspection was undertaken. To make up for the time delay the manufacturer arranged for one motor to be air freighted to New Zealand. This motor and its associated pump, which was purchased separately, were commissioned on 18 February. The other two motors are due to arrive by sea freight at the end of March. They will be installed and commissioned quickly, as all arrangements have now been made.

4.2 **Variable Speed Drives**

These very large AC variable speed drives were manufactured in Napier and have been installed. The issue of Electro Discharge Machining (EDM) and its effect on the pump bearings was recognised at the time of placing the order as a possibility that would need to be checked for. If it proved to be a problem, additional electrical filters could be installed. However, during the manufacturing phase, additional research information became available which indicated that the bearing filters should be installed prior to commissioning.

In Report PE-98.84 an allowance of \$15,000 was made for the EDM bearing filters should they be necessary. This figure was in error and the allowance should have been \$15,000 per unit.

5. **Financial Commitment**

The financial commitment to date is as follows:	\$
Motors	184,680
Exchange rate variations	33,060
Variable speed drives	278,714
Power factor correction	15,000
EDM filters	42,901
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Total	554,355

An allowance should also be made for an additional four days of training in the use of this sophisticated equipment. The cost for this would be \$4,800. As a precaution a contingency of \$1,845 has also been added.

Total maximum commitment	561,000

The current authority for expenditure against this order is as follows:	\$
Contract price	481,321
Bearing filter	15,000
Five percent additional expenditure	24,066
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Total	520,387

This leaves a shortfall of \$40.6 13.

The overall project includes the supply and installation of pumps, motors and variable speed drives, modification to pipework and other equipment, and consequential modifications at the Randwick Pumping Station. The original budget for this project was \$2,630,000. For the 1998/9 Annual Plan the project was rebudgeted to \$2,225,000. The current total expenditure forecast to completion in this financial year is \$1,710,000. The reduction in forecast relates largely to the Randwick Pumping Station, where the pipework modifications have been significantly reduced in extent, and the building modifications deferred, pending a decision by Hutt City Council on the use of the Hutt Park site. The value of the work not now required is of the order of \$200,000. Also lower than expected installation costs have been achieved at Waterloo.

6. Exchange Rate Variations

A significant component of the cost increase relates to the exchange rate variations on the motors. At the time of quotation the exchange rate was 1.0698 DEM to the New Zealand dollar. By the time the order was placed the rate had fallen to 1.0085 DEM to the New Zealand dollar. At that time the supplier offered to fix the price in New Zealand dollars for an additional sum. This was considered and the decision was made that the additional sum was excessive. An approach was made to our bank to purchase forward exchange cover but this alternative was not followed because it may have been *ultra vires*.

Subsequently the New Zealand dollar dropped significantly and at one stage was down to about 0.8. However, by the time of payment, the New Zealand dollar fortunately had risen somewhat to a level of about 0.86.

7. Recommendations

That payment to Vectron Industries Ltd of up to \$561,000 be approved for the supply of three variable speed drive units and AC motors.

Report prepared by:



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Approved for submission:



MURRAY KENNEDY
Strategy and Asset Manager

Recommendation accepted:



DAVID & HAM
Divisional Manager, Utility Services