

ANGUS COUNCIL

ROADS COMMITTEE

29 AUGUST 2002

**THE REPLACEMENT OF STREET LIGHTING COLUMNS
WHICH FAILED THE STRUCTURAL TESTING PROGRAMME 2002/03**

REPORT BY THE DIRECTOR OF ROADS

ABSTRACT

This report outlines the evaluation process in quantifying the costs involved in replacing street lighting columns which failed the Structural Testing Programme for 2002/03 and the arrangements for funding this replacement programme.

1 RECOMMENDATIONS

It is recommended that the Committee agree:-

- (i) to note the results of the recent detailed inspections completed via an independent non-destructive structural testing programme, as reported to the Council at its meeting on 4 July 2002 (Report No 835/02);
- (ii) to note the results of the evaluation process in quantifying the costs involved in replacing street lighting columns which failed the structural testing programme for 2002/03;
- (iii) to note the additional financial burden which will fall on the Council as a result of replacing the test-failed columns;
- (iv) that the costs of replacing the test-failed columns be met from the available balance in the Roads and Transport Renewal and Repair Fund;
- (v) to note that the column replacement programme will commence during August 2002 with the majority of the works planned for completion by the end of November 2002;
- (vi) to note that the Director of Roads will present a further report to a future Roads Committee recommending a policy and procedure consistent with Health and Safety requirements for the purposes of determining future requests for attachments to street lighting columns.

2 INTRODUCTION

During April 2002 the Council carried out a programme of non-destructive structural testing of 604 street lighting columns as reported to the Council at its meeting on 4

July 2002 (Report No 835/02 : Structural Testing of Street Lighting Columns – Results and Consequential Effects of 2002/03 Testing Programme).

This report advised the Council of the following:-

- The type of columns that were tested and the reason for their inclusion in the 2002/03 testing programme.
- That of the 604 columns which were tested there were a total of 109 failures (36 Category 4 failures and 73 Category 5 failures).
- The significance of the various categories of test results. For ease of reference listed below are the definitions, and consequential action required, for test result Categories 4 and 5.

Category 4 The test load was not reached due to material defects. The column does not comply with the structural soundness testing requirements. The column withstood the wind load, but plastic deformation was detected (exceeding the material's yield point). The column has to be removed as soon as possible.

Category 5 The test load was not reached due to material defects. The column does not comply with the structural soundness testing requirements. The column did not withstand the wind load. Plastic deformation was detected (exceeding the material's yield point). The column has to be removed immediately.

- In order to eliminate the risk of catastrophic failure (blowing over) of the 109 test-failed columns an immediate programme of column removal was commenced on Monday 24 June 2002.

All the test-failed columns were subsequently removed by 7 July 2002.

3 DETAILS

'One for One' Column Replacements

Each site affected by the removal of failed street lighting columns was evaluated to determine if the replacement of the failed columns on a 'one for one' basis would result in a satisfactory new street lighting scheme as this was the quickest and most cost effective solution to this problem.

Of the 109 failed columns it was determined that 47 could be replaced on a 'one for one' basis.

In order to determine the approximate cost of replacing these columns the following charge rates were used:

1	Standard column replacement.	£500
2	Standard column replacement with Regional Electricity Company disconnection/reconnection charge.	£700
3	Special column replacement (for attaching hanging baskets).	£650
4	Special column replacement with Regional Electricity Company disconnection/reconnection charge.	£850

Based on the above rates the approximate cost of replacing the 47 columns on a 'one for one' basis is £27,750, as detailed in Appendix 1.

New Street Lighting Installations

Site investigation proved that it would not be prudent to replace all failed columns on a 'one for one' basis as this would not provide the best value long-term solution to this problem. This was primarily due to the fact that the old street lighting design spacing did not comply with the current British Standard for the Installation of Street Lighting (BS5489).

Based on the detailed design of complete new street lighting installations the approximate cost of replacing the 62 columns is £192,500. Comments on each of the schemes are detailed in Appendix 2.

Course of Action

Based on the above findings material has been ordered through Tayside Contracts to expedite the planned improvements. Some of this material has a delivery time of between 6 and 8 weeks. However, Tayside Contracts have sufficient stock to commence the column replacement programme during August 2002. It is anticipated that the majority of this works programme will be completed before the end of November 2002.

Further Report

As stated in Report No 835/02 careful consideration will now have to be given with regard to column design, strength and condition in response to further requests for attachments to street lighting columns (hanging baskets, Christmas decorations, Traffic Signs, etc) and the Director of Roads will present a further report to a future Roads Committee recommending a policy and procedure consistent with Health and Safety requirements for this purpose.

4 FINANCIAL IMPLICATIONS

As detailed above it will cost approximately £27,750 to replace 47 columns on a 'one for one' basis and a further £192,500 to provide complete new street lighting installations to replace 62 columns, giving a total estimated cost of £220,250.

All the costs involved in the replacement programme can be funded from the Roads and Transport Renewal and Repair Fund.

5 HUMAN RIGHTS IMPLICATIONS

There are no human rights implications arising from the proposals in this report.

6 CONSULTATION

The Chief Executive, the Director of Law and Administration, the Director of Finance and the Director of Planning and Transport have been consulted in the preparation of this report.

7 CONCLUSION

The costs involved in replacing the 109 columns which failed the structural testing programme for 2002/03 have now been quantified. Funding is available, work has commenced on the column replacement programme and it is anticipated that this work will be completed before the end of November 2002.

Ronnie McNeil
DIRECTOR OF ROADS

NOTE:

The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (other than any containing confidential or exempt information), were relied on to any material extent in preparing this Report:-

Report No. 835/02 – Angus Council Roads Committee – 4 July 2002.

JMcF/JSG
REPORTS/st.light.cols
6 August 2002

APPENDIX 1

'ONE FOR ONE' COLUMN REPLACEMENT PROGRAMME

LOCATION	NO OF FAILED COLUMNS	APPROXIMATE COST OF SCHEME
<u>Arbroath</u>		
East Kirkton Road	3	£1,500
Kirkton Road, Phase 1	7	£3,500
Peasihill Road	7	£3,500
Sir William Smith Road	6	£3,000
<u>Brechin</u>		
Bridge Street	1	£650
Church Lane	1	£500
Panmure Street	1	£650
River Street	1	£650
Southesk Street	1	£650
Swan Street	1	£850
<u>Forfar</u>		
Carseview Road, Phase 1	1	£850
Don Street	1	£850
Restenneth Drive	4	£2000
St James Road, Phase 2	1	£700
Victoria Street	3	£2,100
West High Street	2	£1,700
<u>Kirriemuir</u>		
Bellies Brae	2	£1,500
Knowehead	2	£1,300
Tannage Brae	2	£1,300
TOTAL	47	<u>£27,750</u>

NEW STREET LIGHTING INSTALLATIONS

SCHEME	NO OF FAILED COLUMNS	COMMENTS	APPROX COST OF SCHEME
<u>Arbroath</u>			
Kirkton Road, Phase 2	20	Although the old street lighting scheme complies with BS5489 the underground cable system is in a very poor condition and would not withstand the column renewal project.	£26,000
Kirkton Road, Phase 3	4	As above note.	£14,000
<u>Brechin</u>			
Montrose Street	2	The old street lighting scheme does not comply with BS5489. It is proposed to extend the renewal project to tie in with new street lighting schemes in Montrose Street and Southesk Street which would result in the replacement of a section of 5 th core cable.	£25,000
<u>Forfar</u>			
Academy Street	4	The old street lighting scheme does not comply with BS5489. The installation of a new street lighting scheme would result in the replacement of a section of 5 th core cable.	£14,500
Carseview Road/Suttieside Road	6	The old street lighting scheme does not comply with BS5489.	£17,000
Market Street	6	The old street lighting scheme does not comply with BS5489. Unfortunately, the columns all failed the hanging basket test. The new street lighting scheme will include special columns which will accommodate hanging baskets and will result in the replacement of a section of 5 th core cable.	£12,000

NEW STREET LIGHTING INSTALLATIONS (CONTD)

SCHEME	NO OF FAILED COLUMNS	COMMENTS	APPROX COST OF SCHEME
<u>Forfar (contd)</u>			
North Street	8	The old street lighting scheme does not comply with BS5489. It is proposed that the replacement columns and the existing columns in North Street be fitted with HPS lanterns (white light) to replace the existing LPS lanterns (yellow light). This will provide a cost effective street lighting improvement throughout the whole of North Street.	£9,000
Old Halkerton Road	1	The old street lighting scheme does not comply with BS5489. It is proposed that the existing street lighting be replaced with 6m columns similar to the columns used in the surrounding area.	£13,500
Prior Road	1	Although only 1 column failed the structural test it is proposed that the recently completed street lighting installations in Prior Road be extended to include this column to properly light the Prior Road/William Street junction. It will also result in the replacement of a section of 5 th core cable.	£5,500
St James Road, Phase 1	6	The old street lighting scheme does not comply with BS5489.	£36,500
<u>Kirriemuir</u>			
Reform Street/Glengate	4	The old street lighting scheme does not comply with BS5489. The replacement scheme involves the installation of ornate street lighting columns/wall brackets as it is within the confines of the Kirriemuir Conservation Area. It will also result in the replacement of a section of 5 th core cable.	£19,500
TOTAL	62		<u>£192,500</u>