REPORT NO 457/00

ANGUS COUNCIL

ROADS COMMITTEE

27 APRIL 2000

REPLACEMENT OF MONTROSE BRIDGE

REPORT BY THE DIRECTOR OF ROADS

ABSTRACT
Further to Report No 106/00 presented to the Roads Committee on 27 January 2000, this report updates the Committee on the progress of various issues involving the existing bridge and proposed replacement bridge carrying the A92 over the River South Esk at Montrose. It also gives an update on the procurement process for the replacement bridge.

1 RECOMMENDATIONS

It is recommended that the Committee:-

(i) approve that the frequency of inspection on the existing bridge be increased to quarterly;

(ii) note the semi-destructive testing carried out on the bridge to confirm the assessment of its condition;

(iii) note the position with regard to deterioration of the bridge and give authority to the Director of Roads in conjunction with the Director of Finance to instruct Carl Bro Group to commission the proposed works to the counterbalances (£70K);

(iv) agree to delegate authority to the Director of Roads in conjunction with the Director of Finance to instruct any additional services required from Carl Bro Group subject to any such services being provided within the revised budget for the Montrose Bridge in the 2000/2001 financial year as detailed in the Report.

(v) note the progress of the Stage 1 commission and consultation for the prospective replacement structure;

(vi) note the updated procurement process and programme

2 INTRODUCTION

In the Report No. 106/00 to the Roads Committee on 27 January 2000 the Director of Roads detailed the issues concerning Montrose Bridge and the need to procure a replacement bridge within an estimated 5 year timescale.

The Council have previously formed a multi-disciplinary team chaired by the Director of Roads consisting of Senior Officers with specialist skills from Roads, Planning and Transport, Finance, Law and Administration and Property Services who are charged with progressing this challenging project for the replacement structure. Private sector consultants are also engaged to provide detailed technical advice on the condition of the existing structure.

As reported previously the financial implications for the replacement would present the Council with funding difficulties. The Chief Executive has written to the Minister of Finance at the Scottish Executive setting out the special needs of the project and requesting that consideration be given to the treatment of it as a vital "lifeline" project. It was also agreed that the Director of Finance write to the President of COSLA requesting that specific consideration be given to such lifeline projects in the current comprehensive spending review under consultation between COSLA and the Scottish Executive

3 DETAILS

3.1 Existing Bridge

The existing bridge was inspected in early February 2000 by Council staff along with staff from Carl Bro Group who carried out the bridge assessment and prognosis pursuant to their earlier work.

The original assessment took into account probable corrosion of the reinforcement and delamination of the concrete in the bridge deck. The assessment predicted that as this corrosion and delamination continued the bridge would show increased flexual cracking in the deck soffit as a symptom of this continuing deterioration.

The 6 monthly inspections have revealed that both the existing cracks are worsening and that new cracks are occurring in the deck of the bridge. The original analytical assessment has been reviewed in light of this progression. In addition Carl Bro, in conjunction with their specialist sub-consultants, have concluded their study on the alkali aggregate reaction in the structure and its effects.

On the basis of this combination of inspections, study results and a review of the analytical work, Carl Bro have recommended:-

(i) An increase in the inspection frequency to every 3 months. It is therefore recommended that the inspection frequency is increased in line with Carl Bro's recommendations.

(ii) Semi-destructive testing be carried out on parts of the bridge deck to establish with confidence the degree of reinforcement corrosion and concrete delamination that has occurred to date. This testing will consist of trial holes and cores in the deck and will facilitate

confirmation or otherwise of the assumption made in Carl Bro's structural assessment. This will allow Carl Bro to confirm the mechanism of the bridge deterioration together with providing firm evidence of the extent to which the deterioration has progressed. Trial holes were broken out in mid April 2000. Cores will be taken at the same time as the next (accelerated) inspection in May 2000.

A Report on the further testing/inspection/analysis will be reported to the Roads Committee on 8 June 2000.

In addition to the above, Carl Bro also have concerns regarding the integrity of the counterbalances on each end of the bridge superstructure. It is considered that they may deteriorate due to the aggregate alkali reaction, causing delamination which could result in loss of the counterbalances' structural integrity. Carl Bro have therefore recommended works which would involve remedial measures to the counterbalances to overcome the delamination. This would restore the counterbalances to being fully effective and would be similar to the repair works previously carried out on the bridge towers and can be seen as being complementary to same. Costs are currently being sought from Carl Bro and it is anticipated that the construction work could be undertaken in summer 2000. Committee are asked to delegate authority to the Director of Roads in conjunction with the Director of Finance to instruct Carl Bro Group to commission the necessary works (estimated cost - £70K).

Committee are also requested to delegate authority to the Director of Roads in conjunction with the Director of Finance to instruct any additional services required from Carl Bro which may be necessary, subject to any such services being contained within the revised budget for Montrose Bridge in the 2000/01 financial year as detailed in the Report.

3.2 Stage 1 Commission

Members will recall that the Stage 1 Commission was covered in Report No 107/00 to the Roads Committee on 27 January 2000. The Babtie Group were appointed to carry out the Commission which included reviewing the alignment options and confirming the initially preferred option; compiling and agreeing a list of consultees; preparing initial consultation documents; and undertaking the initial consultations with statutory consultees and other interested bodies; all with the purpose of identifying constraints with which a replacement structure should comply.

The Babtie Group has established the list of consultees to be approached. The initial consultation has now been carried out and responses have been received from many of those contacted. Presently, the Babtie Group is arranging to meet with the consultees to identify any development constraints or requirements that could affect the alignment, design or construction methods or materials of the replacement structure.

It is programmed that this work will be completed in May 2000 and will be further reported to Committee in due course.

3.3 Procurement Process

In the Report No 106/00, a proposed procurement method was detailed which had three further stages. The philosophy of this route was that an outline design be prepared by the Council's consulting engineers appointed at Stage 2. This design was then to be progressed in detail and was to be priced by tenderers bidding to construct the bridge.

This procurement method has been examined in greater detail, and now has been amended to facilitate wider consideration of possible design options and to comply fully with the timescale requirements of EC Public Procurement Regulations.

Market testing has also been undertaken by means of consulting with eight of the larger firms of contractors having appropriate expertise to undertake a project such as this. The market testing was carried out to gauge the response of the industry to the alternative methods of procurement available to the Council. In particular it has become apparent from this consultation that the industry may, subject to certain conditions, be prepared to accept a planning risk. This seemed doubtful in the past and therefore encouraged the more conventional route previously proposed. This result from the market testing opens up opportunities to bring on board the contractors at an earlier stage prospectively resulting in improved value for money to the Council. At the same time the procurement method can enable greater scope within the design element of the competition.

In addition, taking on board relevant legal advice it is clear that in order to be fully compliant with European Commission Public Procurement Regulations there would be a need to advertise each commission stage of the procurement process in the Official Journal of the European Communities (OJEC). The time period for the process is, in practical terms, a minimum of 6 months for each stage. The timescale for the previously proposed procurement methodology is therefore likely to be extended.

Details of the European Commission procurement requirements are described in Appendix No 1.

To attempt to mitigate the impact of European Commission Public Procurement Regulations an amendment to the proposed method has been made which reduces the future stages to two (from three). This streamlines the procurement process somewhat, although the additional time required to comply with the European Commission procurement requirements cannot be fully recovered. The two further stages (viz 2 and 3) are summarised as:-

Stage 2; Appointment of a firm of Consulting Engineers to take the Inception Report from Stage 1 and develop the project including the requirements and

constraints to a position where tender documents can be issued to design and build contractors. There would then be an input by the Consultant into the tendering and contract award process.

Stage 3; This is the award of contract to the design and build tenderer; the planning process (which follows on from Stage 2); the detailed design and the construction of the new structure.

It is proposed that a portion of the preparatory work be undertaken by Council staff including certain surveys, the preparation and supervision of the geotechnical investigation contract and the Planning Supervisor role. The preliminary geotechnical investigation contract is expected to be let in the summer of 2000 to determine the ground conditions at the site.

The procurement programme has been reviewed in light of the above and an outline programme is attached as Appendix No 2. It will be noted that the Stage 2 Consultants cannot be appointed before October 2000 and that it is anticipated that the Design and Build Competition will be held between December 2001 and August 2002. It is anticipated that the project will be in a position to enter the statutory planning process around September 2002. If planning consent is achieved without the need for a Public Local Inquiry it is hoped that construction will be able to commence by August 2003 with the new crossing opening in April 2005.

4 FINANCIAL IMPLICATIONS

4.1 Report No 106/00 outlined the extreme funding difficulties that will be faced by the Council if this 'lifeline' project requires to be promoted from the current severely restricted capital resources. Accordingly, as previously outlined, the Chief Executive has written to the Minister of Finance at the Scottish Executive setting out the special needs of the project and requesting that consideration be given to the treatment of it as a vital lifeline project. Similarly, the Director of Finance has written to the President of COSLA requesting that specific consideration be given to such lifeline projects in the current comprehensive spending review under consultation between COSLA and the Scottish Executive.

To date no replies have been received, from either the Minister or COSLA.

4.2 The Council's current Financial Plan (1999/2003) contains the following provision for the ongoing operation and maintenance of the existing bridge and the procurement of its replacement.

	2000/2001 **£'000**	**2001/2002** **£'000**	**2002/2003** **£'000**	**Later Years** **£'000**	**Total** **£'000**
Replacement	120	220	160	6200	6700
Inspection and	30	30	30	60	150

Maintenance					
Total	150	250	190	6260	6850

4.3 The updated estimate of the various capital costs that may be incurred in relation to the operation of the existing bridge and the procurement of its replacement are shown below.

	2000/2001 **£'000**	**2001/2002** **£'000**	**2002/2003** **£'000**	**Later Years** **£'000**	**Total** **£'000**
Inspection and Maintenance	30	30	30	60	150
Replacement	70*	20	20	-	110
Stage 1 Study	15	-	-	-	15
Stage 2 Study	25	110	65	-	200
Surveys/GI	40	-	-	-	40
Professional Fees (inc internal recharge)	20	40	75	300	435
Construction Works	-	-	-	5900	5900
	170	170	160	6200	6700
Total	200	200	190	6260	6850

*£50K to be accommodated from Roads and Transport Renewal and Repair Fund.

4.4 The estimated capital requirements for 2000/2001 is £50,000 more than the provision in the Financial Plan due entirely to the cost of the remedial repairs to the counter-balances, the need for this work having only just been identified by Carl Bro following the inspections in February 2000. It is anticipated that this £50,000 can be accommodated via a £50,000 allocation from the Roads and Transport Renewal and Repair Fund as identified in Report No 442/00.

The estimated requirement for 2001/2002 is £50,000 less than the Financial Plan provision with future years currently in line with budget provision. It has been assumed that quarterly inspections of the existing bridge will require to be carried out right through until the new structure is opened. Beyond 2000/2001, however, only nominal provision has been made for repairs in that it is anticipated that only unavoidable repairs will be made as the bridge nears the end of its life. Professional Fees are shown as increasing as the design-build and planning stages are reached peaking sharply during construction. It

has been assumed in the programming and costing that a Public Local Inquiry will not be required as part of the planning process.

As identified in January in Report No 106/00, in the event that a PLI is required it is likely that the project programme will be delayed and additional costs incurred.

5 CONSULTATION

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

6 CONCLUSION

The situation with the existing bridge is being monitored with a proposed increase in the frequency of inspections, trial holes and cores, along with proposed remedial works to the counterbalances.

The procurement of the replacement bridge is being progressed through the Stage 1 commission and the proposed method for further progressing the project is laid before Committee in the Report for approval.

Dr Bob McLellan
DIRECTOR OF ROADS

NOTE

The following background papers as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing the above Report:_

Angus Council Roads Committee – Report No AC100/95 – 11 October 1995. (A92 Montrose Bridge – Situation Summary No 1).

Angus Council Roads Committee – Report No AC9/96 – 17 February 1996. (A92 Montrose Bridge – Situation Summary Report No 2).

Angus Council Roads Committee – Report No AC997/97 – 28 November 1996. (A92 Monrtrose Bridge – Situation Summary Report No 3).

Angus Council Roads Committee – Report No 106/00 – 27 January 2000. (Replacement Montrose Bridge).

BMCL/JSG
31 March 2000
REPPORTS/mont.bridge.replace

APPENDIX 1

EC Procurement Requirements

The European Commission Procurement requirements for the project is laid down in:-

The Public Works Contracts Regulations 1991 (applicable to the replacement bridge contract)

The Public Services Contract Regulations 1993 (applicable to the Consultancy Commission for Stage 2)

The regulations apply to the project where the cost are above prescribed finance levels.

As a result of the regulations the services and works required must be advertised in the OJEC. The regulations detail the time periods between placing notices for prospective tenderers and the issue of tender documents. These time periods can be reduced by the use of Prior Information Notices (PINs).

In order to shorten the timescale for awarding the Stage 2 Commission, a PIN was included in the OJEC on 29 March 2000. Further notices will be required in May 2000.

APPENDIX 2

MONTROSE BRIDGE REPLACEMENT

OUTLINE PROGRAMME

Finalisation of Inception Report (by Stage 1 Consultants):	June 2000
Placing of OJEC Advertisement for Stage 2 Consultants:	May 2000
Appointment of Stage 2 Consultants:	October 2000
Preparation of Development Statement:	November 2000 – May 2001
Development of Competition Procedures and Documentation:	June – November 2001
Design & Build Competition:	December 2001 – August 2002
Council publishes Notice of Intention to Develop:	September 2002
Planning Process*	September 2002 – April 2003
Council confirms commencement of construction:	June 2003
Construction Period:	August 2003 – March 2005
New Crossing opens:	April 2005

*This timescale is based on the assumption that a Public Local Inquiry is not required as a consequence of the NID, and a construction period of 21 months.