



*Meeting of Forth Estuary Transport Authority
18th December 2009*

Budget Monitoring 2009-10

1 Purpose of report

To advise the Authority of the Revenue and Capital budget to forecast expenditure position to 31st March 2010. This report has been prepared in consultation with the Chief Engineer and Bridge Master.

2 Main Report

Forecast expenditure to grant received

- 2.1 The forecast over spend to grant is £2.216m; Grant-in-Aid 2009-10 is £13.055m, forecast expenditure is estimated to be £15.271m.
- 2.2 The estimated forecast to grant position and movement to that previously reported to the Authority is shown in the table below:

Expenditure type	Grant in-Aid £'000	Forecast 18th Dec £'000	Over Spend £'000	Forecast 28th Aug £'000	Forecast movement £'000
Revenue	5,048	6,008	960	5,898	110
Capital	8,007	9,263	1,256	9,058	205
Total	13,055	15,271	2,216	14,956	315

- 2.3 The forecast overspend of £2.216m will be met from Reserves. Section 6 of this report details the Reserve position.
- 2.4 Revenue expenditure has been forecast to increase marginally by £0.110m to that reported to the Authority on the 28th August 2009. The recurring element of the Revenue forecast shows a small increase totalling £0.054m, mainly in employee costs and Maintenance and Operations transport costs. The Revenue costs of Capital Plan projects have been revised upwards by £0.056m in relation to the Anchorage Investigation and Main Cable Replacement/Augmentation study. These increases are due to revised forecasts from the consultants. The Capital Plan forecasts have increased by £0.205m. The Capital position is detailed in paragraph 4.

3 Revenue expenditure

3.1 The forecast Revenue over spend is £0.960m.

3.2 The Revenue over spend split between recurring expenditure and the Revenue costs associated with the Capital Plan is shown in the table below;

Revenue expenditure	Grant in-Aid £'000	Forecast 18th Dec £'000	Over Spend £'000	Forecast 28th Aug £'000	Forecast movement £'000
Recurring	5,048	5,186	138	5,132	54
Revenue costs of Capital Plan projects	0	822	822	766	56
Total	5,048	6,008	960	5,898	110

3.3 The recurring over spend of £0.138m, representing an increase of £0.054m to that previously reported to the Authority, is primarily due to a reduction in forecast external interest receivable as a result of a drop in interest rates since the budget was set. It has also been forecast that there will be minor increases in Transport costs, primarily within Traffic Operations.

3.4 The Revenue costs of the Capital Plan are forecast to be overspent by £0.822m, an increase of £0.056m to that previously reported to the Authority. This is principally due to the budget for these costs being financed by Capital grant. This results in a corresponding under spend within Capital, see paragraph 4.2 below.

4 Capital expenditure

4.1 The forecast Capital over spend is estimated to be £1.256m, representing an increase of £0.205m in expenditure to that previously reported to the Authority.

4.2 The table below details the forecast over spend per project 2009-10 and details of the increases in expenditure to that previously reported to the Authority;

Capital expenditure	Grant in-Aid £'000	Forecast 18th Dec £'000	Over/(Under) Spend £'000	Forecast 28th Aug £'000	Forecast movement £'000
Viaduct Bearing Replacement	300	820	520	613	207
Main Expansion Joints Replace	500	774	274	252	522
Main Cable Dehumidification	2,287	3,266	979	3,266	0
M9 Spur/A8000 Main Contract	380	833	453	899	(66)
Other Projects	3,760	3,570	(190)	4,028	(458)
Revenue costs of Capital Plan projects	780	0	(780)	0	0
Total Capital	8,007	9,263	1,256	9,058	205

4.3 The main reasons the variance are as follows:

- 4.3.1 Viaduct Bearing Replacement - £0.520m over spend - The project has been brought forward as a result of a delay in the Anchorage Investigation. Further costs are being incurred as a result of additional work to the concrete viaduct piers.
- 4.3.2 Main Expansion Joints Replacement - £0.274m over spend – The forecast for the project have been increased 2009-10 and in future years as reported to the Authority on the 30th October. This is due to an increase in tender costs.
- 4.3.3 Main Cable Dehumidification - £0.979m over spend – As reported to the Authority on the 28th August 2009 the additional costs are primarily due to the provision of a third gantry to accelerate the works as a result of weather related delays and the subsequent increase in site supervision. There were also unforeseen delay costs relating to Cable Band Bolts.
- 4.3.4 M9 Spur/A8000 Main Contract - £0.453m over spend – This has reduced from £0.066m to that previously reported to the Authority. When the budget for the project was agreed 2009-10 there were a number of unknown outstanding issues that could not be determined at that time. These included costs relating to contractor claims, land acquisition, disturbance claims and compensation claims which currently remain subject to negotiation and litigation. These costs have now been estimated by The City of Edinburgh Council and are based on a “most likely” outcome. Further revisions may be required once claims are settled, this accounts for the movement to that previously report to the Authority.
- 4.3.5 Revenue costs of the Capital plan - £0.780m under spend – As indicated in paragraph 3.4 above, the Revenue costs of the Capital Plan are classified as Revenue, however grant received from Transport Scotland has been classified as Capital. This has resulted in a Capital under spend of £0.780m.

5 Funding

- 5.1 The Scottish Government is committed to a three-year spending review settlement of £41.007m. This settlement was for financial years 08-9 to 10-11.
- 5.2 The three-year position compared to this grant is set out below;

	2008-9 £'000	2009-10 £'000	2010-11 £'000	Total £'000
Spending Review Funding				
Revenue	7,070	5,048	4,410	16,528
Capital	6,895	8,007	9,577	24,479
Total	13,965	13,055	13,987	41,007

	2008-9 £'000	2009-10 £'000	2010-11 £'000	Total £'000
Forecasts	Actual	Forecast	Budget	Total
Revenue	5,033	6,008	5,451	16,492
Capital	6,505	9,263	8,831	24,599
Total	11,538	15,271	14,282	41,091
Over / (Under) Spends estimated	2008-9	2009-10	2010-11	Total
Revenue	-2,037	960	1,041	-36
Capital	-390	1,256	-746	120
Total	-2,427	2,216	295	84¹

¹ The forecast overspend is 0.2% of the total three-year settlement figure.

6 Reserves

6.1 The audited financial statements were presented to the Authority at its meeting on 30th October 2009 where the Authority noted reserves of **£6.913m** at 31st March 2009.

6.2 The projected over spend for 2009-10 referred to in paragraph 2.1 above amounts to £2.216m. Projected reserves at 31st March 2010 would therefore total **£4.697m**.

6.3 The estimated Reserve position is summarised in the table below;

Reserve	2008-9 Actual	2009-10 Forecast	2010-11 Forecast
	£'000	£'000	£'000
Opening Reserve	(4,486)	(6,913)	(4,697)
(Surplus) /Deficit	(2,427)	2,216	295
Closing Reserve	(6,913)	(4,697)	(4,402)

6.4 These reserves are subject to a number of key risks, the most significant of which are;

6.4.1 Future bridge strengthening and improvement works yet to be determined.

6.4.2 Main Cable Strength. The inspection of the main cable in 2008, determined that the cables had lost around 10% of capacity due to corrosion. A system of dehumidification has now being fitted to the main cables and monitoring of the drying process has now started. Dehumidification is a well-tried system of preventing corrosion of steel and is already in use in the anchorage chambers of the bridge. However, its application to main cables of suspension bridges is relatively new. Such systems are being fitted to new bridges to protect them from corrosion and retrofitted to older bridges in Japan, Sweden and Denmark where corrosion has been uncovered. Whilst there is good reason to have confidence that dehumidification can slow down or halt corrosion there is no body of evidence yet available to allow an unconditional assurance to be given that this will work on the Forth Road Bridge.

- 6.4.3 Anchorage Investigation. A total sum of £7.266m has been allocated to this project. However, the work is likely to involve excavation in rock to expose the post-tensioning strand in the anchorage tunnels and will have to be done with extreme care to avoid damaging the strands. It is further complicated by both the proximity of the existing viaduct piers, local housing and access roads. Environmental issues are also a key risk. In addition, full scale testing of the sockets within the anchorage chambers is also being considered and access, containment and designing one off testing equipment will increase the financial risk. The project is also undergoing a peer review and this may change the nature of the investigation.
- 6.4.4 Viaduct Bearings Replacement. Given the increase in actual tender prices against estimates recently received for the Main Expansion Joint Access Platform, there is a risk that a similar increase in cost will occur for this project. However, estimates compare favourably with similar work recently completed on Tay Road Bridge. A total sum of £17.088m has been allocated for the project which is currently out to tender with a return date in December 2009.
- 6.4.5 Suspended Span Truss Assessment. The checking process for this assessment is substantially complete and the checking process is underway. This assessment work may result in strengthening work being required on the Truss.
- 6.4.6 Parapet Investigation. Following the successful completion of the Suspended Span Parapet testing, work on the Viaduct Parapet testing has now commenced. This work may lead to a re-evaluation of containment levels and a further assessment of the need to replace the Viaduct Parapets. A sum has been included in the Capital Plan for replacement.
- 6.4.7 Cable Band Bolts. £0.630m has been included in the Capital Plan for this work. However, until the full extent of the cracking is determined the final cost of the remedial works can not yet be established. Ten cracked nuts in total have been found and replaced. The investigation into the cause of the failures is nearing completion and a final report will be brought to the Authority in February 2010.
- 6.4.8 Main Expansion Joints. The decision to delay the replacement of the Main Expansion Joints until the opening of the Forth Replacement Crossing in 2016 was made in February 2009. Additional inspection and monitoring regimes to the joints, including the removal of all the plate trains on a rolling programme up until 2016, is being carried out and temporary failsafe devices are being procured and will be installed along with the replacement or modification of key components such as pins and springs. A new permanent access system is being procured to facilitate both the inspection and monitoring of the joints. The access system will also be used to assist in the future replacement of the joints. However, given their age, there is still a residual risk that, in the event of an unforeseen significant failure of the joints, full replacement would have to be carried out before 2016. There is also a risk of delay to the Forth Replacement Crossing Project and if such a delay occurred then a review of the joint replacement programme would have to be carried out.

- 6.5.0 Improvements to Deck Half Joints. A sum of £0.413 m has been included for this work in 2009/10 to 2011/12. This is to carry out a trial erection of an improved detail at the orthotropic deck half joints. These joints occur every 18 metres and the original detail is causing both structural problems and issues with ride quality. The maintenance of the existing detail is taking up more and more time and resources. The cost of replacing all 768 of these joints has not been allowed for as further discussion will be required following the trial.
- 6.5.1 Suspended Spans Underdeck Access. The existing steel and aluminium access system is almost 30 years old and is likely to need considerable remedial work or complete replacement at some stage in the near future. A sum of £0.115 m has been included for investigation into either replacement or remedial work. The cost of replacement is likely to be significant but has not yet been allowed for in the Capital Plan.
- 6.5.2 A8000/M9 Spur – Currently a number of matters have still to be concluded that may impact on the final cost of the scheme. Forecasts built in are currently based on “Best-Case” settlement assumptions and may be subject to review as highlighted in paragraph 4.3.4
- 6.6.3 It should be noted that the main key risks remain the condition of the Main Cable and the Anchorages. Investigations are continuing into both elements and as results from these investigations become available then the level of risk can be evaluated. No allowance has been made in the Capital Plan for the replacement of the Main Cables or the Anchorages.

7 Conclusions

- 7.1 The Reserve balance at 31st March 2009 is £6.913m. The anticipated over spend 2009-10 of £2.216m would reduce this Reserve to £4.697m at 31st March 2010.
- 7.2 A number of key risks exist as identified in paragraph 6.4 that may impact on the Reserve balance.
- 7.3 The financial position will continue to be closely monitored during 2009-10 and further reports will be prepared.

8 Recommendation

- 8.1 It is recommended that the Authority note the contents of this report.

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Treasurer

Appendices:	None
Contact/Tel:	Toby MacDonald: 0131 469 3078
Background Papers:	Held at offices of the Treasurer