



*Meeting of Forth Estuary Transport Authority  
29<sup>th</sup> October 2010*

## **Budget Monitoring 2010/11 Quarter 2 to 30<sup>th</sup> September 2010**

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### **1 Purpose of report**

To advise the Authority of the forecasts for revenue and capital expenditure to 31st March 2011. This report has been prepared in consultation with the Chief Engineer and Bridgemaster.

### **2 Summary**

#### **Forecast expenditure to grant received**

- 2.1 The forecast over spend against grant is £1.075m; Grant-in-Aid 2010/11 is £13.845m, forecast expenditure is estimated to be £14.920m.
- 2.2 Forecast expenditure has reduced by £1.452m from the £16.372m reported to the Authority in August. Forecasts have reduced in revenue by £0.084m mainly relating to adjustments to employee costs. The capital forecast has reduced by £1.368m mainly relating to delays in the Viaducts Bearings Replacement Project which will result in a deferral of expenditure between financial years. These are shown in more detail in table 4.2.
- 2.3 The estimated forecast to grant position is shown in the table below:

<b>Grant-in-aid 2010/11</b>	<b>Grant-in-aid £'000</b>	<b>Forecast Quarter 2 £'000</b>	<b>(Under) / Over £'000</b>	<b>Forecast Quarter 1 £'000</b>	<b>Movement £'000</b>
Revenue	5,115	4,834	(281)	4,918	(84)
Capital	8,730	10,086	1,356	11,454	(1,368)
<b>Total</b>	<b>13,845</b>	<b>14,920</b>	<b>1,075</b>	<b>16,372</b>	<b>(1,452)</b>

- 2.4 The forecast over spend of £1.075m will be met from reserves. Section 5 of this report details the reserve position.

### 3 Main Report

#### Revenue expenditure

3.1 The forecast revenue under spend is £0.281m. This under spend is due to;

- (i) Employee costs – under spend £0.250m – savings associated with vacant posts not being filled, turnover and overtime and allowances being reviewed.
- (ii) Other costs – under spend £0.031m – mainly forecast under spends on Insurance and City of Edinburgh Council support costs.

### 4 Capital expenditure

4.1 The forecast capital over spend is estimated to be £1.356m.

4.2 The estimated forecast to grant position is shown in the table below:

Capital Plan	Grant-in-aid £'000	Forecast Quarter 2 £'000	(Under) / Over £'000	Forecast Quarter 1 £'000	Movement £'000
Parking Areas Landscaping & Reconstruction	200	370	170	340	30
Tower Painting/Dropped Objects Canopy	250	220	(30)	135	85
Main Cable Dehumidification	307	420	113	307	113
Main Expansion Joints Under Deck Access Platforms	1,638	1,207	(431)	1,492	(285)
Viaduct Bearing Replacement	5,022	5,983	961	7,348	(1,365)
M9 Spur extension / A8000 upgrade	183	489	306	537	(48)
Other projects	855	1,051	196	1,015	36
Revenue costs of Capital Plan	275	346	71	280	66
<b>Total Capital</b>	<b>8,730</b>	<b>10,086</b>	<b>1,356</b>	<b>11,454</b>	<b>(1,368)</b>

4.4 The main reasons for the 2010/11 forecast over spend are as follows:

4.4.1 Parking Area Landscaping and Reconstruction - £0.170m over spend - The scope of reconstruction increased and the actual tender cost exceeded the estimate.

4.4.2 Tower Painting/DOC - £0.030m under spend – The reduction in cost is due to a delay on the procurement contract to dismantle the Dropped Object Canopy. A further increase to the Quarter 1 forecast is due to an external contractor been employed to erect the painting cradle and undertake associated works.

- 4.4.3 Main Cable Dehumidification - £0.113m over spend – Since the last budget update in August, various modification works have been identified on the dehumidification project that will incur additional costs.
- 4.4.4 Main Expansion Joints, Under Deck Access Platforms - £0.431m under spend – The activity schedule for this project was revised. The project is due to be completed in December 2010 and the latest forecast from the contractor is that it will be further under budget.
- 4.4.5 Viaducts Bearing Replacement - £0.961m over spend – The 2010/11 budget for this project was based on an anticipated spend profile prepared by the project Engineer, the revised forecast is based on the contractor's activity schedule. Works on this project are currently behind programme resulting in a delay to payments on the activity schedule. This will impact on future year payments on the project.
- 4.4.6 M9 Spur/A8000 Main Contract - £0.306m over spend – As reported in August there are a number of unknown outstanding issues that cannot be determined at this time. These included costs relating to land acquisition, disturbance claims and compensation claims which currently remain subject to negotiation and litigation. Further revisions to future year forecasts may be required once claims are settled.
- 4.4.7 Other projects - £0.196m over spend – Additional studies are being carried out on Tower Wind Barriers/Impact Strengthening. The actual tender cost also exceeded the estimate for the Suspended Span Gantry Refurbishment and works were required to procure the contractor for the trial joint installation which was brought forward in relation to improvements to Deck Half Joints.
- 4.4.8 Revenue costs of Capital Plan - £0.071m over spend - Mainly additional Suspended Span Truss Strengthening investigation expenditure.

## **5 Reserves/Risk**

- 5.1 The audited reserve at 31<sup>st</sup> March 2010 is **£5.459m**. Based on a projected over spend of £1.075m as referred to in paragraph 2.1, the project reserve at 31<sup>st</sup> March 2011 would be **£4.384m**.
- 5.2 These reserves are subject to a number of key risks, the most significant of which are;
  - 5.2.1 Future bridge strengthening and improvement works yet to be determined.
  - 5.2.2 The Comprehensive Spending Review 2010. A report will be brought to the Authority in December.
  - 5.2.3 Anchorage Investigation. The pre-tensioning form of construction used in the anchorage tunnels can be vulnerable to corrosion and deterioration, especially in a saline environment such as is found at Forth. Records and papers acquired relating to the construction of the existing anchorages highlighted various problems during construction. As a result there is a need to carry out a special inspection or investigation to try to establish the existing condition of the pre-tensioning strands.

If the investigation does reveal significant deterioration in the steel strands within the anchorage tunnels then, depending on the level of that deterioration, measures may have to be considered to limit loading on the bridge. The investigation of the anchorages in itself carries significant risk. The work will initially involve excavation in rock to expose the post-tensioning strands in the southern anchorage tunnels and will have to be carried out 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. Full scale testing of the sockets within the southern anchorage chambers are not being carried out in the first phase of works but may be required depending on the outcome of the inspection. Work on the northern anchorages will also be dependent on the outcome of the work on the southern anchorages. A Peer Review of the project has now been completed and work is programmed to start on site in the autumn of 2011. A sum of £7.6m is included in the long-term Capital Plan.

- 5.2.4 Main Cable Strength. The inspection of the main cable in 2008, determined that the cables had lost around 10% of capacity due to corrosion. Dehumidification of the main cables continues and the first indication of the system's effectiveness will be available in 2012 when the cable is re-inspected. 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 dehumidification will be effective on the Forth Road Bridge.
- 5.2.5 Cable Band Bolts. The investigation work into the cracking of the cable band bolt nuts being carried out by consulting engineers, Aecom, has been delayed due the difficulty in accessing the cracked nut which was discovered following the completion of the dehumidification project. Access to this location required the design and fabrication of a bespoke small platform. This work to replace the cracked nut and bolt assembly has now been completed by the programmed date and this should allow for final reporting on the matter by the end of 2010.
- 5.2.6 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. A new permanent access system is being installed 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. In addition, FETA staff have now completed the installation of the failsafe devices under 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.
- 5.2.7 Improvements to Deck Half Joints. A sum of £0.350m has been included for this work in 2011-13. 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 of these joints has not been allowed for as further discussion will be required following the trial.

- 5.2.8 Suspended Spans Under Deck 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. The cost of replacement is likely to be significant, however no budget was allowed for in the long-term Capital Plan noted by the Authority at it's meeting in February 2010.
- 5.2.9 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.
- 5.2.10 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.

## **6 Conclusions**

- 6.1 The Reserve balance at 31<sup>st</sup> March 2009 is £5.459m. The anticipated over spend 2010/11 of £1.075m would reduce this Reserve to £4.384m at 31<sup>st</sup> March 2011.
- 6.2 The financial position will continue to be monitored closely for the remainder of the financial year and a further report will be prepared for the meeting of the Authority on the 25<sup>th</sup> February 2011.

## **7 Recommendation**

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

**DONALD McGOUGAN**  
Treasurer

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