



Final Report

Junction 36

Directorate: Environmental & Planning Services
Date: October 2006

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Auditor: David Barraclough

1. Introduction

- 1.1. An audit of Junction 36 was carried out as part of the internal audit plan for 2005/06. This was carried out before the project was completed in order to alert management to issues which might necessitate early action.
- 1.2. An initial application by the Authority for grant funding for the improvement of Junction 36 of the M4 with an estimated scheme cost of £1,526,600 did not gain approval
- 1.3. Following further negotiations with the funding body the scheme was amended to accommodate their requirements and criteria and therefore became a gateway enhancement scheme to the valleys.
- 1.4. The amendments required by the funding body included the addition of environmental enhancements. Other items included in the new bid were additional resurfacing works and revised programming to limit conflict with existing businesses
- 1.5. The new scheme was submitted a year later and was approved with an estimated total cost of £1,856,632
- 1.6. Total Project Costs (Capital) submitted to WEFO at the time of audit:

Item	Total £
Construction	1,339,012
Environmental Improvements	100,000
Design Professional Fees	329,070
Administration	88,550
Total	1,856,632

- 1.7. The final break down of costs submitted to WEFO at the time of audit:

Item	Amount £
Total Project Cost	1,856,632
Total Eligible Expenditure	1,745,032
Total Ineligible Expenditure	111,600
Amount of Grant Applied for	610,761
Overall Grant rate	35%

- 1.8. Bridgend County Borough Council (BCBC), selected and invited twelve contractors, on the 17th June 2004, to submit a pre-qualification submission to the scheme. The evaluation team consisted of staff from BCBC, Capita Symonds and EC Harris. Of the twelve contractors invited to pre-qualify seven returned compliant submissions of which two were deemed unsuccessful at the prequalification stage. The remaining five were invited to tender for the role of main contractor.
- 1.9. The two highest scoring contractors were invited to present their tenders to the evaluation team. The contract was awarded to Edmund Nuttall Ltd.
- 1.10. The Scheme used the Engineering and Construction Contract Option C form of contract, with amendments, as the main contract. The scheme is based on the pain/gain principle of

sharing the losses/cost savings. This type of contract claims to encourage the contractor to look for the cost savings. At the time of the audit the Final Target Cost was £1,361,246.00 against the Final Actual Cost of £1,415,459 a 4% increase above the Final Target Cost. This would indicate a “pain” share of £54,213 between Edmund Nuttall and BCBC (based on figures supplied at the time of the audit). i.e. An extra cost to each of £27,107.

1.11. The scheme attracted funding from Objective 1, Local Regeneration Fund Match Funding and Private sector contributions.

2. Objectives of the Audit

2.1. The main objectives of the audit were to evaluate the following control systems:

- Project management
- How the main contractor was selected
- The main contract and risk register
- The application for European Objective 1 support and the resultant systems which should be in place to record/measure key elements including –
 - Match funding
 - Financial records
 - Non financial records, including measures of outputs
 - Proposed storage/archiving of records
- Controls in place to ensure compliance with grant conditions
- Payments to contractor etc.

3. Summary and Audit Opinion

- 3.1. The audit recognises the good work carried out by BCBC staff associated with the project and the expertise of the project manager throughout the works. There is also recognition of the difficulties encountered during the project that were outside the control of BCBC and the effect this had on operations and costs.
- 3.2. During the testing phase of the audit program, it was noted that there was good communication between BCBC support staff, the Project Manager and the contractor Nuttall's. This can be attributed only in part to the details of the contract, a significant element must be credited to the way both BCBC and Nuttalls entered into the spirit of making the project work. This proactive ethos allowed opportunities for improved value management and innovation for example allowing the contractor to manage negotiations over common land.
- 3.3. There was also good evidence that the use of early warning procedure/compensation events allowed both parties to consider solutions that allowed delays/costs and associated risks to be managed. The project manager indicated that throughout the project the contractor was completely open with costs and access to information and had not to date disputed the pain share of the overrun liability.
- 3.4. Further success can be evidenced by the absence of high levels of public criticism during the works and the method and timing of traffic management used during very busy phases of commuting and retail periods.
- 3.5. There was good evidence on file to indicate that disruption to the local economy was minimized and that Tourist Information and retailers were consulted (Macarthur Glen/Sainsbury's). In apparent support of the successful improvements made to the junction, Sainsbury's (Bridgend) placed a full page advertisement in the local press indicating that it was now even easier to get to their store.
- 3.6. During the audit, consultation with the project manager, client manager and BCBC staff contributing to the project revealed a number of strengths and weaknesses in controls and associated risks that may have implications for the project funding and future projects. Strengths have been noted above and the use of the ECC form of contract does encourage use of some good key controls, including target costs, early agreement on compensation events to anticipate and control costs and use of a risk register.
- 3.7. A number of issues have been raised for consideration by management including:-
 - Current lack of guidance to project managers on factors to be considered when choosing the form of contract to be used. The ECC form has not been used in BCBC for many contracts, many projects are managed under an ICE form.
 - Whilst the ECC form promotes the use of early agreement on compensation events and a risk register, there was room for improvement in the use of these controls.
 - Ensuring current insurance cover by the contractor is an important aspect of any construction project. Control over this will be partially implemented in the 'Management of Contractors' system. This is subject to a separate internal audit review.
 - There is a contractual relationship between BCBC and the funding body whereby the Authority must produce certain outputs in return for grant funding. It is important that project files contain a good audit trail of compliance with requirements. We have also given advice on ensuring output data is captured and management has decided to establish trigger points in projects to ensure such data is captured.

- 3.8. One “Fundamental” issue was identified during the audit. The nature of ECC contracts means that there is ‘open book’ accounting by the contractor with access to all costs available to BCBC and its agent. This is part of the partnering ethos which promotes innovation to the benefit of both employer (BCBC) and contractor (Nuttal). There is also a reduction in paperwork held by BCBC as copies of documentation are not needed due to access to the contractor’s files. However, normal expectation of documents relating to European funded schemes is that all documentation of costs etc. should be available for audit. Documentation required for internal audit and possible European Audit purposes were not readily available for review, but held by the contractor across multiple sites. It is due to this risk of possible difficulty in substantiating costs to external auditors that we must state that we believe **inadequate assurance** can be gained that grant funds will not be reduced.

Acknowledgement

- 3.10 A number of staff gave their time and co-operation during the course of this review. We would like to record our thanks to all of the individuals concerned.

4. FINDINGS AND RECOMMENDATIONS

The **objective** column details the objective of the system being reviewed.

Risk may be viewed as the chance, or probability, of one or more of the organisation's objectives not being met. It refers both to unwanted outcomes which might arise, and to the potential failure to realise desired results.

The **recommendations** column is categorised on the following basis:

- Fundamental* - action that is considered imperative to ensure that the organisation is not exposed to high risks;
- Significant* - action that is considered necessary to avoid exposure to significant risks;
- Merits attention* - action that is considered desirable and should result in enhanced control or better value for money.

4.1 Project Management

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
4.1.1	To assess the status and implementation of project management policy and procedure	That the project is not delivered on time or it ends above cost	The project management system operated without overall guidance from project management policy and procedure. BCBC is trialling a toolkit on a number of projects. This toolkit was developed by the project manager and the head of ICT. Internal Audit is due to review the trial shortly.	None	
4.1.2	To ensure management were able to make corrections during the project	Management are unable to make informed corrections to the project	No Monthly status reports were issued for the project	Guidance on use of status reports is issued	Merits Attention
4.1.3	To assess the use of, and value gained from performance measurement of the project	Performance of the project is not fully monitored	No KPI's were used throughout the project	a) Management issues guidelines on the use of KPI's for future	Merits Attention

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
				projects. b) The use of KPI's are considered within project planning and are commensurate with the size of the project	
4.1.4	To ensure the project team monitor issues for future contracts	Future contracts continue to be problematic	Problems with the contract are not documented	Contract issues are documented	Merits attention
4.1.5	To ensure that good practices have been identified and are able to be transferred to other Project Management processes	Subsequent projects do not benefit from experience. Project Managers leave taking knowledge with them	Good practices identified throughout the project were not captured for future use	Management introduces guidelines on capturing good practices	Merits attention

4.2 Main Contract and risk register review

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
4.2.1	To ensure the contract form is the appropriate vehicle to control the project.	That the most appropriate contract is not used	Although documentary evidence was supplied that the choice of contract was discussed, this was based on the flexibility of the contract. There was no evidence that the choice of the ECC contract offers significant advantages or cost savings over any other form of contract. Documentation on file states that a request for the detailed	Formally establish procedures and criteria to guide future projects on the form of contract to be used.	Significant

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
			rational for contract choice was requested by management after the decision was made.		
4.2.2	To ensure that variations to the contract are timely and appropriately costed.	That costs escalate beyond budget at end of contract	<p>Compensation events register details show that a number of events are not costed or agreed. It was therefore not possible to calculate the impact on Cumulative Target Price or for management to assess the risk at the time to the project cost.</p> <p>It is not clear from the register how up to date it is.</p>	Compensation events register is agreed and completed before project sign off	Significant
4.2.3	To ensure the adequacy of the risk register	That the project is affected adversely by predictable events	The risk register was not monitored or amended	The risk register is used as a live document.	Significant
4.2.4	To ensure that the contractor is adequately insured.	That the contractor can not meet subsequent liabilities	That the contractors insurance was not verified as adequate to cover the contract	<p>a) Management should ensure that this control is actioned as part of the recent Management of Contractors Internal Audit Report.</p> <p>b) Where appropriate, management should also make sure that procedures include the review of insurance details during the period of the contract.</p>	Significant

4.3 Funding Review

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
4.3.1	The project management system is adequate to address all key risks which should include securing the funding.	Funding is clawed back	<p>Queue counts and ATC comparison began 03/10/2005 Further monitoring required to comply with funding requirement had not started when the information was requested on the 15/06/06. It was stated that post project monitoring is usually some time after completion of construction.</p> <p>The client manager confirmed that he had not received a date for the completion of the monitoring but had received a ERDF letter requesting that BCBC confirm that we still anticipate meeting targets</p>	That this project and subsequent projects have agreed monitoring trigger points established post project completion to ensure monitoring data is captured to fulfil compliance with funding requirements	Significant
4.3.2	To ensure that payments made to the contractor and supporting documentation are available and retained for an adequate period of time.	<p>Documentation is incomplete, fraudulent etc</p> <p>Documentation held is insufficient for European audit inspection</p>	Original Documentation held by contractor –difficult to audit due to storage at multiple sites	Management should ensure that retained records are sufficient for European Audit Inspection	Fundamental

No	Objective	Potential Risk	Test Result	Recommendation	Categorised as:
4.3.3	To assess the adequacy of controls to ensure compliance with grant conditions	Grants are clawed back due to non-compliance	No auditable trail of compliance with grant conditions	Checklist of requirements detailing an auditable trail becomes part of project documentation	Merits Attention
4.3.4	To assess the level of involvement and value of the Objective 1 team on funding controls	Funding is clawed back due to non compliance	There was an apparent lack of communication between the Objective 1 team and the J36 project team in T&E. T&E has been increasing its own expertise but lessons learnt may not be known to others. There may also be opportunities for the Objective 1 team to take on some of the workload in dealing with WEFO and in building a corporate expertise.	Consideration be given to increasing liaison between project managers and Corporate Services Objective 1 Team.	Merits Attention
4.3.5	To ensure funding/budgets are regularly monitored	Project goes over budget.	Client Manager spreadsheets used for financial monitoring were not current at the time of audit.	Spreadsheets are updated regularly	Significant
4.3.6	To assess the adequacy of payment controls	Unauthorised payments are made	Payments are signed off by Project Manager above delegated authority limits of £50,000	Ensure project managers are aware of the limits to their authority.	Significant
4.3.7	To ensure that funding risks are identified and captured	Funding is not available	Confirmation letters of funding for the revised application for LRF Match funding were not in place until project end. However a review of emails and letters on file indicate this delay is attributable to WEFO	Inclusion on and use of a risk register to demonstrate that this risk had been considered. Risk register is used by Finance as well as project team	Merits attention

5.1 Management Action Plan

Rec. No.	Recommendation	Para. No.	Categorisation	Agreed	Management Comments	Officer Responsible	Date to be implemented
1.	Management should ensure that retained records are sufficient for European Audit Inspection	4.3.2	Fundamental	Yes	Arrangement are now in place for the retention of these records as well as records for future projects utilising this type of contract	Client Manager	2006
2.	Formally establish procedures and criteria to guide future projects on the form of contract to be used	4.2.1	Significant	Yes but merits attention	The decision on what type of contract to choose can only be a made by a competent construction professional on each contracts individual merits. I therefore consider that this only merits attention. However since this contract was let, a criterion has been developed and adopted by the project managers QA system	Project Manager	2006
3.	Compensation events register is agreed and completed before project sign off	4.2.2	Significant	Yes but merits attention	As with any construction project the contract cannot be completed until this register is agreed and completed and could be up to 18 months after the completion of the works. All compensation events should be agreed within 28 days, however there are certain occasions when this agreement is not possible due to certain site circumstances. The compensation events register is a rolling document and is only completed at the end of the contract. The Audit was carried out during the contract and therefore this point is neither significant nor material.	Project Manager	2006

Rec. No.	Recommendation	Para. No.	Categorisation	Agreed	Management Comments	Officer Responsible	Date to be implemented
4.	The risk register is used as a live document.	4.2.3	Significant	Yes but only merits attention	The risk register will always be live during the project and if no risks are identified then no change will be made. It is also now included in the toolkit. I therefore consider that this point only Merits Attention	Project Manager	2006
5.	a) Management should ensure that this control is actioned as part of the recent Management of Contractors Internal Audit Report. b) Where appropriate, management should also make sure that procedures include the review of insurance details during the period of the contract.	4.2.4	Significant	Yes	This process is now part of the Management of Contractors Manual	a) Project Manager / Procurement b) Project Manager / Procurement	2006 2006
6.	That this project and subsequent projects have agreed monitoring trigger points established post project completion to ensure monitoring data is captured to fulfil compliance with funding requirements	4.3.1	Significant	Yes but only merits attention	a) The targets set for J36 was the No. of km of transport route built / improved and the No. of public transport schemes improved at and through the junction. The route has been improved / built and comments have been received from the Public Transport Operators that we have improved the throughput of public transport through the junctions. We have therefore met our targets. b) The counts that are being undertaken were over and above that needed for the monitoring targets. It is nearly always the case that targets cannot be measured until after the project finishes and all the final financial claim forms request target information. However, reminders will now be placed in Calendar's to create trigger points, however I only consider this point only Merits Attention	Client Manager	2006 2006

Rec. No.	Recommendation	Para. No.	Categorisation	Agreed	Management Comments	Officer Responsible	Date to be implemented
7.	Spreadsheets are updated regularly	4.3.5	Significant	Yes but only merits attention	The main financial spreadsheets are held by corporate finance, which are included within the claim. The spreadsheet kept by the Client Manager is for monitoring purposes only and therefore it is not imperative that they are kept up to date at regular intervals	Client Manager	2006
8.	Ensure project managers are aware of the limits to their authority	4.3.6	Significant	Yes but only merits attention	All staff were made aware of the limit of their authority. I will reiterate to staff their authority, however as these details were available before the contract I consider that this point should only Merit Attention.	Head of Engineering	2006
9.	Guidance on use of status reports is issued	4.1.2	Merits Attention	Yes	Agreed. This has now been included in the toolkit as well as the QA procedure	Project Manager	2006
10.	a) Management issues guidelines on the use of KPI's for future projects. b) The use of KPI's are considered within project planning and are commensurate with the size of the project.	4.1.3	Merits Attention	a) No b) Yes	a) As all projects are different, comparison KPI's would not provide any valuable information on some projects b) I consider that the use of KPI's should be a professional judgement as it is dependant on the type and duration of the project	a) Project Manager b) Project Manager	2006 2006
11.	Contract problems are documented	4.1.4	Merits attention	Yes	Agreed. This has now been included in the toolkit as well as the QA procedure	Project Manager	2006

Rec. No.	Recommendation	Para. No.	Categorisation	Agreed	Management Comments	Officer Responsible	Date to be implemented
12.	Management introduces guidelines on capturing good practices	4.1.5	Merits attention	Yes	Agreed. This has now been included in the toolkit as well as the QA procedure	Head of Engineering	2006
13.	Checklist of requirements detailing an auditable trail becomes part of project documentation	4.3.3	Merits Attention		All financial claims used to draw down grant funding will incorporate the main grant conditions. Should any ancillary conditions be required then a checklist will be created	Client Manager	2006
14.	Consideration be given to increasing liaison between project managers and Corporate Services Objective 1 Team.	4.3.5	Merits Attention	No	Direct contact was established with WEFO during this project, which improved communications, by cutting out any intermediary. However since that time improved communications with that team have been made. I therefore consider that this point should only Merit Attention	External Grant Team	2006
15.	Inclusion and use of risk register to demonstrate that risks had been considered Risk register is used by Finance as well as project team.	4.3.7	Merits attention	Yes	Agreed. Any funding risks will be included on the risk register	Project Manager	2006

Internal Audit
Bridgend County Borough Council
Brackla House
Brackla Street
Bridgend
CF31 1BZ