

**Introduction**

I am Richard James Bourne. I am a Chartered Civil Engineer. Between July 1984 and March 1996, I worked for Lothian Regional Council. Following the 1996 Local Government re-organisation, I was transferred to and worked for The City of Edinburgh Council (CEC) between April 1996 and September 2007.

I was involved in the Edinburgh Tram Project between 2003 and 2007. By this stage, reports had been commissioned by CEC to identify the preferred method to meet future public transport demand anticipated from the proposed regeneration areas of north Edinburgh, to identify preferred tram routes, and to provide initial project costings.

My role was associated with Edinburgh Tram Line 3 (ETL3) (City Centre to Newcraighall), as 'ETL3 Tram Partner'. The role of ETL Tram Partner was to act as the main contact between CEC and TIE Limited (Tie), liaising with other CEC Departments providing assistance, monitoring progress, providing advice and input for the development of the project and assisting with the preparation of Council Committee reports, as necessary. During this period, I had regular contact with Tie. I worked with two other CEC colleagues, namely [REDACTED] (ETL1 North Loop) (sadly, now deceased) and [REDACTED] (ETL2 City Centre to Newbridge) and my line manager was Transport Planning Manager, [REDACTED]. As an existing employee and then as a former employee of CEC, I was never requested to sign any confidentiality agreement.

As requested by the Tram Inquiry, in its letter of April 2016 to me, the following paragraphs set out:

- my observations of working with Tie
- why the project incurred delays
- why the project overran its budget and delivered less than the original scope.

I have prepared the following statement on the basis that the Tram Inquiry has asked me for my opinion and CEC has now committed itself to assisting and co-operating with the Tram Inquiry. I, therefore, do not expect and would not welcome any further action by CEC or any other party/organisation involved in the project against me in either my personal or professional capacity as a consequence of this statement.

Much of my statement is based on both professional and personal observations, conversations and discussions that cannot be supported by written evidence. Meetings were often not minuted and notes, if they existed at all, were brief and 'sanitised'. Conversations (both official and un-official) were often not recorded. The existence of some alleged documents, spoken about by individuals, was subsequently denied by others as ever having existed.

## Tie Ltd

Tie was initially set up as there had been concerns CEC did not have the resources (following the 1996 Local Government reorganisation) to project manage and deliver major transport infrastructure projects. I understand some Councillors and MSPs held the same view. [REDACTED] [REDACTED], formerly of CEC, was one of the original members of Tie. Tie was established so that, working outwith CEC pay structures, it could attract 'the best people' and also avoid the requirement to work within some of the procurement and reporting structures operated by CEC. The principle of Tie and its theoretical ability to deliver major projects more effectively than Council officials appeared to have appealed to Councillors and to the industry at large.

Tie worked on the basis that it was charged, amongst other things, with delivering the Edinburgh Tram Project. For ETL1 and ETL2, Tie seemed to adopt the attitude that 'it knew best' and that issues raised by other parties, including those of CEC officials, need not be addressed. However, initial Tie staff involved in the tram project appeared to have little direct experience of the delivery of other tram schemes. I was aware a different attitude appeared to be adopted for ETL3, primarily due to the inclusive approach adopted by the Tie ETL3 Project Manager (Willie Fraser).

Working with Tie, I was disappointed at the lack of professionalism shown by some members of Tie staff and their consultants, in regard to acting with open minds, fairness, technical competence and project control. It soon became apparent that a lot of Tie staff considered themselves almost superior to CEC staff to the extent that Tie was unwilling to liaise with CEC professional officers or listen to their advice, despite CEC being the "owner" of the project and, in effect, Tie's client. As a member of the Institution of Civil Engineers, I have to abide by its Code of Conduct and am not allowed to publicly criticise the professionalism of individual civil engineers.

The operating agreement established between CEC and Tie did not seem to be robust and contractual relationships were weak. This, combined with an apparent lack of any control over how Tie operated and reported to CEC, was a key issue. Senior CEC management seemed either unwilling or unable to address this issue. Essentially, the only method CEC could have utilised to retain control would have been to withhold payment of Tie's monthly invoices, but this would have had little effect other than to result in an overdraft for Tie, which had no assets or any need to make a profit, leaving CEC to bear payment of the overdraft out of the grant monies.

This lack of fiscal control may also have supported Tie's apparent belief that it, in effect, controlled the Government's grant. This, in my view (along with the knowledge that both the tram project and others in which Tie were involved were high-profile), fuelled an ethos within Tie that Tie itself should look "look the part" of an organisation capable of dealing with major infrastructure projects. It found city centre offices and expanded its staff numbers swiftly, engaging numerous external consultants and advisors, with questionable justification. Again, senior CEC managers appeared reluctant to challenge Tie on its decision-making processes or control Tie's staffing and internal spending decisions. From discussions with the CEC member of staff who was tasked with initially checking Tie invoices, there appeared to be little budget control. Excessive expenditure on non-essential items, such as Christmas decorations and expensive furniture, etc, was common.

Pay scales were significantly higher than equivalent CEC ones, even for those CEC staff who transferred to Tie but it was not evidenced that Tie had secured the 'best' staff to deliver the project or that Tie understood the need for financial restraint as a public sector organisation. In addition, Tie was apparently able to set its own bonus system, which appeared not to be linked to any delay or failure, such that the bonus payments would almost have been guaranteed payments.

During its operation, Tie engaged a number of senior staff, either directly or through arm's length companies (in some cases, the individual's own company). Feedback from various sources suggest some Tie senior staff members induced a culture of bullying and fear, such that junior members of Tie staff felt unable to report any points of concern or potential problems with the development of the Edinburgh Tram Project. CEC senior officials, if they were aware of the risks of such a culture to the tram project itself, would have had very little formal means to influence the situation.

Tie considered that its key purpose was to deliver the Edinburgh Tram Project without compromise or regard to concerns raised by others, including CEC officials. Instead, there appeared to be a focus on courting the support of businesses, politicians and special interest groups who would offer vocal public support for the tram scheme whilst having little understanding or interest in the significant, and consistently unresolved, risks of the project and, importantly, without having to contribute financially to the scheme. This was supported by the proclamations of influential public figures, such as the Leader of the Council [REDACTED] who was reported in the media as having stated that objectors were "enemies of the tram project".

However, this culture was very different to how CEC transportation officials generally tended to operate and procedures to which we were required to operate. From my experience of many previous CEC projects, queries and objections had to be handled with courtesy and robust evidence-based arguments presented in response. In addition, senior CEC officials and management had often taken an interest in the development of CEC projects, from the initial feasibility stage to delivery. However, for the Edinburgh Tram Project, they seemed reluctant to question Tie, to challenge Tie's decision making or closely monitor progress of the project. Less senior CEC officials were, therefore, powerless to influence the project or to ensure that it was progressing effectively. Questions of a technical nature put to Tie were either ignored or met with "Why do you need to know that?"

It is clear political influence also affected the timetable of development of the Edinburgh Tram Project, with items rushed to meet other agendas. Senior Councillors wanted the ETL1 and ETL2 Bills lodged early so they were submitted prior to the Edinburgh Congestion Charge referendum and "would not be held up in the queue" of other Bills to be considered by the Scottish Government. Concerns were raised by the CEC Tram Partners that development work was not yet complete and some key aspects and risks still needed to be quantified and addressed but these concerns were ignored with the ETL1 and ETL2 Tram Partners told that such questions would be addressed at the detailed design stage (but this would be too late to address properly).

In my view, this was a major failing of the project as, after the Scottish Government considered the Tram Bills in the absence of key financial, technical and other information pertaining to the level of risk, the project was to revert back to CEC which would be responsible for the promotion and delivery of the project with no independent scrutiny required, other than that of Transport Scotland through its control of the government grant. That situation in itself, given the highly political nature of the project, ran the risk that major risks would not be addressed for fear of adverse publicity swaying public opinion.

Senior CEC management appeared unwilling to either challenge Tie or to provide Councillors with alternate advice that the scheme should not progress to the next stage until the risks were more clearly defined and some basic technical information was to hand, particularly in relation to certain 'hotspots'. In those circumstances and, given the importance of official reports to the Full Council to inform decision making, it is hard to understand why senior CEC officials chose to sign off those reports themselves.

When my wife decided to object to the tram scheme and became more involved, pressure was brought to bear on her via my employment status. My wife's statement talks about this in detail and I confirm those details are correct. At the time of the first incident, I could not understand why the tram project was being allowed to proceed in the absence of some basic technical and planning data and given the very substantial financial risks which existed to CEC. However, when a second similar incident of intimidation occurred in 2007 under a new line manager, I was left with no other conclusion than that, in order to remain as a professional officer within CEC, it would be necessary to either compromise my professional judgement and integrity or take the consequences to my career and so I chose to resign.

Transdev were brought on board the Edinburgh Tram Project at a relatively early stage to give operational and technical advice to Tie, as it was an experienced tram scheme operator. Transdev representatives were very much of the opinion that the public should be informed of the disruptions anticipated during the construction phase and that work should be done in liaising with affected parties. Also, during a discussion with Transdev officials, one of them stated that, in their opinion, the core tram network should have been (i) Leith Docks to City Centre and (ii) City Centre to the Royal Infirmary of Edinburgh, as key patronage generating routes. This obviously conflicted with Tie's objectives and Transdev seemed to be subsequently side-lined and then 'let go' from the project.

Everything related to the Edinburgh Tram Project had to promote positive news and, to support this approach, Tie engaged professional PR consultants and a lot of time and expenditure seemed to be spent on 'spin'. Early modelling work for ETL1 and ETL2 had produced high patronage forecasts. I remember a meeting to discuss ETL3 modelling work (the development of ETL3 was effectively running a year behind ETL1 and ETL2 and was supposed to be benefiting from lessons learned). The modelling consultant had updated the base model, changing some of the key assumptions to '*better reflect the most up-to-date situation*'. Copies of the modelling report were distributed. Tie noted that, whilst the case for ETL3 patronage was relatively strong, the changes

in the base model meant the revised forecast patronage figures for ETL1 and ETL2 were *'a disaster and if we proceed with these, we might as well pack up and go away'*. Copies of the report were collected from attendees (although the TIE ETL3 PM retained a copy, I believe) and Tie stated the base model was to revert back to the previous scenario and this earlier version was to be used.

It is also the case that consultants engaged by Tie appeared to adopt a similar attitude to Tie, in that no negative aspects or areas of concern should be reported. For example, it transpired that Mott Macdonald, consultants to Tie, had failed to properly appraise a potential on-street route option to directly serve the Western General Hospital, which was considered by CEC officials as a key destination. Official Minutes produced by Councillor [REDACTED]' office of the meeting at which this became apparent omitted to mention this oversight. However, the Parliamentary ETL1 Committee sought evidence specifically in regard to the adequacy of the tram route in relation to the hospital and a Mott Macdonald staff member stated, under oath to that Committee, that the particular road had been initially considered but ruled out, although it had not been documented in the options report. Having been involved in a number of transport appraisals that involved route and option sifting, I have never come across or heard of the practice of not reporting the full sifting process within a report and would draw the Inquiry's attention to the route sifting appraisal of ETL3 as an illustration of a more transparent and logical appraisal. One might conclude that, regardless of the importance that the tram directly serve one of the city's two main hospitals, the decision was taken to downplay the reasons for a failure in the route sifting appraisal rather than risk the ETL1 Committee insisting that the route be reviewed, thereby causing delay to the programme.

However, CEC officials were firmly of the view that a review of the tram route in relation to the Western General Hospital should have been undertaken given its importance as a public facility and as a core generator of patronage. This omission supported pre-existing concerns about the heavy reliance being placed on the development areas in North Edinburgh as the major source of patronage (peak periods) at the expense of other major public facilities and areas which could generate passengers throughout the course of the day. Apart from the risk that such a route may not deliver any meaningful uplift in public transport usage, I am aware that the Final Business Case of ETL1 did contain an appendix which examined the risks of the Waterfront and other developments not being built within the timescale or to the extent assumed, but this appendix does not appear to have received much consideration by CEC, Tie or decision makers. This was indicative of a general reluctance to consider or discuss what might go wrong or to make adequate provision against downside scenarios or unforeseen circumstances.

### **Expenditure**

As mentioned above, Tie, in my view, operated a culture of excessive expenditure to reflect its self-importance, including the small army of staff supported by many consultants and advisors. It seemed strange that Tie, whose staff were supposed to be "the best" lacked sufficient expertise to undertake so many elements of the project themselves. Tie staff often seemed unwilling or unable to multi-task, such that different people were engaged to project manage individual elements of the project. CEC had limited control over this expenditure. The amount of money that

was expended on project management costs and consultancy fees does seem high, compared with implementation costs, when compared with other major transportation projects.

There also appeared to be a lack of effective project management skills in some areas within Tie with regard to ETL1 and ETL2. Again, CEC were unable to exercise any control and senior CEC management seemed reluctant to raise such issues. This was, in my opinion, primarily due to senior CEC Councillors being so keen to see the Edinburgh Tram Project delivered and impressed by presentations from Tie staff that they did not want to hear any concerns from CEC officials. It was suggested that CEC staff were simply jealous of the Tie staff pay scales. As far as I and the other two CEC Tram Partners were concerned, this was not the case – we were/are professional engineers who wanted to see, and be associated with, good transport projects delivered effectively and efficiently, with the interests of the public we served taken into account (a trait of good municipal engineers). Our concerns were linked to technical issues and how poor project management appeared to be happening, together with incomplete or misleading information which presented risks to both the project and CEC.

The political influence was also a factor in cost over-run of the Edinburgh Tram Project. A source suggested one of the draft versions of an early tram feasibility report had a higher cost estimate for the delivery of ETL1 and ETL2 than £375 million. It was suggested some stakeholders had questioned this higher value and instructed it be reviewed. The final report contained the £375 million value. A relatively short time later, the Scottish Government announced the £375million grant to CEC for implementation of the tram scheme (subsequently, the Scottish Government stated the grant was to be index-linked and raised it to £500 million). To be clear, I never saw the alleged draft version of the report and have little doubt that the existence of such an initial higher cost estimate will be denied.

It also appeared to be case that Tie adopted the view that whilst the grant included an element of contingency, this might be readily available for expenditure. Hence, there seemed to be a lack of budget and risk control to work to the base cost estimate. For some reason, which has never been fully explained or justified, Tie took the decision not to apply the levels of Optimism Bias required by government documents at the various stages of the project and this was not challenged by senior CEC financial officers. This resulted in contingency levels always being underestimated and the failure to identify adequate source(s) of funds which CEC could use in the event of cost over-run. The use of OB levels lower than prescribed was also supported by the Scottish Government and only challenged by tram scheme objectors and the Ove Arup peer review for the Scottish Parliament's Tram Committees, although no information is available as to why the Tram Committees did not accept Ove Arup's opinion and failed to ensure that the correct levels were applied.

Whilst the Scottish Government grant for the tram project was £500 million, CEC were committed to contributing £45 million, most of which was to come from developer contributions. Had this contribution been greater, then CEC may have been more concerned about the need to ensure the project was robust, that it would be delivered to the extent planned, that it would deliver real

benefit and that its financial exposure was limited. However, there were occasions when CEC relaxed its demand that developers actually make the full contributions, leaving a shortfall to be met by CEC from other sources.

The utilities gave rise to major concerns and problems. Most engineers are aware that working with utilities can often lead to problems, especially when needing to move existing ones. The CEC Tram Partners suggested that more investigations needed to be undertaken to establish the location and extent of existing services, many of which were very old. It is usual to excavate trial pits to locate such services, record their number and condition, to help inform decision making which can then influence the final design. For the Edinburgh Tram Project, Tie made much of its intention to use radar surveys to locate utility positions, in order to limit disruption and evasive trial pits. Subsequently, it appears that those radar surveys failed to pick up utility services located underneath others, resulting in lengthy programme delays and unanticipated expense.

Monitoring of construction and quality of workmanship is another area of concern. I am aware a CEC member of staff was given the role to monitor some of the MUDFA work. This individual was an experienced CEC Direct Labour Organisation workman (the Council's in-house roads contractor) and soon reported his concerns with poor workmanship. However, he had no authority to instruct changes on site and could only report back to CEC management who should have passed concerns onto Tie. The supervisor did not see any subsequent remedial work being undertaken. His frustration at his lack of authority resulted in him soon asking to be taken off the project.

Tie took the decision to split construction into utilities (MUDFA contract) and tram works (INFRACO contract). The associated contracts were written such that utility work would be complete before tram works started at a particular location. The subsequent over-run of the MUDFA contract is well documented but this resulted in Tie being unable to deliver clear sites to the INFRACO contract, allowing the contractor to immediately lodge claims. I understand that such disputes began to occur prior to the signing of the contract which begs the question of why the Chief Executive instructed its signing at all.

Other technical concerns were raised by the CEC tram partners. For example, it was known that significant engineering works would be required at Balgreen, which would affect the limits of deviation and be expensive. For many CEC transport projects, such a 'hot spot' technical issue would have been investigated early in the design process, in order to inform and influence the decision making. However, such concerns were effectively dismissed by senior CEC staff and also Tie, with the frequent *'it will be addressed at the detailed design stage'* response.

A key factor of the construction cost overrun also relates to the contract document used. On a number of occasions, Tie was allegedly advised not to proceed with the form of contract that it subsequently used. I have also been informed that it was suggested a draft version of the contract document was passed to Transport Scotland for comment. It has been claimed this resulted in a document 'full of red pen' but I understand that when [REDACTED], MSP, asked Transport

Scotland about this, she received a response from Transport Scotland that it had never received the draft contract, looked at it or made any comment.

I was also advised that CEC Legal Services had concerns with the construction contract. There has been talk of a meeting, which took place during one weekend, when CEC Legal Services, other senior CEC management and Tie officials, were instructed to attend by the CEC Chief Executive, [REDACTED]. If such a meeting took place, then I would be surprised if it was minuted but my understanding is that despite CEC Legal Services strongly recommending at the meeting that the contract should not be signed in its current form, [REDACTED] allegedly insisted that it should be and I would suggest that the Inquiry may like to investigate whether such a meeting took place. The contract subsequently proved to be a key reason for project expenditure overruns giving the contractor many legitimate grounds for claims which contributed to major cost over-run.

Cost over-run was also linked with poor monitoring and supervision and a number of parties are to blame for this. Tie's attitude was that the contract was robust and, therefore, its initial position was correct when dealing with claims. However, the contractor won most of its claims. Tie staff and its consultants tasked with supervision apparently failed in their duty to monitor construction progress. CEC officials seemed reluctant to query progress and merely signed off submitted invoices. Transport Scotland also does not appear to have queried progress and simply authorised grant payments, with little apparent question. This lack of responsibility is particularly evident during the lengthy dispute period when virtually all work stopped on site for well over a year but significant expenditure was approved and paid. In my opinion, this was a major failing in that, if payments had been made, as was originally planned, on the basis of the 'completion of key project milestones', then it should not have been possible for emerging problems to have been allowed to remain unresolved for so long. The withholding of payments of the grant and CEC contribution should have forced a review of the project when the contractor downed tools. This may, in turn, have resulted in a much shorter tram route but one that would not have exceeded the funding available to such a significant extent.

In summary, the 'failure' of the Edinburgh Tram project can be summarised as being due to the following contributory factors:-

- Initial cost underestimation
- Continued unwillingness to consider appropriate contingency/OB levels
- Lack of early robust technical data, particularly in relation to location and extent of utilities
- Lack of initial focus and investigation of key technical 'hotspots'
- Tie assumption initial outline design was adequate for detailed design
- Delaying elements of design, such as associated traffic management and TRO requirements
- Political desire to deliver project quickly resulting in lack of insistence on basic technical and cost data
- Lack of appropriate expertise within Tie, certainly initially
- Over-reliance on expensive consultants

- Tie's attitude towards, and treatment of, objections
- Priority given by CEC elected members to Tie
- Over-reliance on patronage levels based on new development forecasts, rather than serving existing patronage generators
- Questionable method of route sifting appraisal for ETL1, leading to biased support for Roseburn Corridor alignment
- Manipulation of data to suit ETL1 and ETL2 reports and business cases
- Failure of Scottish Parliament Tram Committees to insist that outstanding technical and financial issues were addressed prior to recommendation to approve Tram Bills
- Lack of robust management of CEC senior officials, resulting in failure to monitor Tie performance, ensure adequate progress of project or minimise CEC financial exposure
- Failure of CEC senior officials to report accurately to Councillors, particularly in relation to risks
- Failure of CEC senior officials to support and act on concerns raised by CEC officials reporting to them
- Unwillingness of Councillors to acknowledge or discuss technical/financial issues or concerns regarding Tie
- Lack of expertise of local and national politicians to understand and question project risks
- Failure of politicians to scrutinise and monitor project adequately
- The contract
- Audit Scotland report on tram project leading to incorrect belief by MSPs that Audit Scotland gave project a "clean bill of health" – failure of Audit Scotland to correct this misunderstanding
- Failure of Scottish Parliament to understand associated risks of the project
- Failure of Transport Scotland to ensure grant payments were only made on completion of key milestones
- Unjustified support of CEC that Tie's interpretation of contract was correct
- Unwillingness of senior CEC representatives to initially discuss directly with contractors during contractual dispute
- Assumption of project promoters and consultants that they will not be held accountable for failure
- No independent professional scrutiny of progress of project following granting of Tram Bills

## **Conclusion**

The above comments set out some aspects of the Edinburgh Tram Project that I believe influenced the final outcome of the project and contributed to its poor delivery, timetable overruns and the substantial cost increase. As a professional engineer, who was once proud to work for a local authority in the delivery of projects aimed at benefiting the public, I am embarrassed and extremely disappointed by how such a transport project was poorly delivered. In my opinion, it damages the reputation of the engineering profession, the reputation of CEC officials and the City of Edinburgh Council, possibly beyond repair and certainly for a long time.

Richard Bourne

Edinburgh

2 May 2016