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**From:** Jim McEwan  
**Sent:** 27 July 2009 14:15  
**To:** David Mackay  
**Subject:** Mudfa issues  
**Attachments:** MUDFA Prolongation Issues Summary for DM 270709..docx

David

I have attached a summary brief on the issues requested. About 6 months ago I explained to the board that there were 3 vectors governing the progress of the MUDFA works :- Productivity (of the supplier), Quality (of Supplier works, design and information) and the Unknown, my view was that we could improve productivity and quality and thus assure that we dealt with the unknown as effectively as we could, but the extent of those unknowns would determine the length of this programme. The attached brief essentially focuses on the unknowns. I believe we have improved the productivity and quality, not to the level we would like but regrettably our options were limited in rectifying that, we have de-scoped works from Carillion, but replacing them entirely was not a viable option. My audit carried out last August revealed a number of control and quality issues, these have subsequently been audited and found to be in much better state, the Carillion Management team was replaced and that has also made a difference.

It is extraordinarily frustrating to see the dates move out, but every day seems to bring a fresh challenge and a fresh insight to the problems at hand. About 10% of the sites in question were surveyed by our designers prior to producing their designs, great reliance is placed on extant Utility drawings and CEC drawings. Clearly a more intensive surveying would have reduced the unknown elements but it's important to realise that said intensive surveying would essentially have required substantial excavations/works at any rate to prove the route

I walked the entire length of the job 2 weeks ago, and witnessed 1<sup>st</sup> hand the current state of what we are requiring to do, the best way of disarming any criticism of our efforts is to go look and see what we are dealing with and get a feel for the difficulties and complexity, I know that when Richard reviewed same he gained a fresh understanding of the scale of the engineering that was being undertaken.

Please advise if you require any further information

Kind Regards

Jim