Measurement Error – NT008 Horndon B MTA

Thank you for your response (dated 6th February) to the additional questions/points we raised, which was issued by the Joint Office on 15th February.

Unfortunately we still have a number of concerns and we would like to take this opportunity to provide further comment as detailed below, as we believe that there are still a few areas, which have not been sufficiently addressed.

Q2. No further comments.

Q3b & Q18. No further comments.

Q9 & Q15: Our comments still stand, having an error where the standard deviation almost matches the error in magnitude does not give confidence in the calculated error, in this case there is a probability that the error could be very close to zero as a result. This case is different from cases where the distribution affects the magnitude of the error but there is definitely an error.

In general terms we have concerns that the calculation must always return an error and correction, no matter how little confidence there is in the result. This also links to the fact that the expert always returns an error very close to that originally estimated by the network operator.

Q10: No further comments, agree clarity added to section 2.2 would be appropriate.

Q19: Acknowledgement of information provided and accepted. The measured value of 6.73 ^{o}C corresponds to a true value of 5.53-7.93 ^{o}C and 6.5 ^{o}C is well within that range.

Q25: Using ambient temperature is a very weak approach as this introduces even more uncertainty. The report states that *"the sites roughly followed each other"*, this is not an acceptable response as there must be a point when the uncertainty of the approach for a small error deems the outcome unviable due to the high uncertainty in determining the error. Therefore we are concerned that the approach used in this case is a *'rough'* guess, at this rate - potentially no more than a 'finger in the air' estimate of the error. There must be a point where the estimate of the error is not possible due to the high level of uncertainty.

Q29: The principle remains, as with the historic Farningham meter error, that if there is no data available then the prudent approach is not to assume there is no error, the other approach is to demonstrate there was flow and data or show why the data was not recorded for each case. If there is no data and there is no evidence of a reading, an error should not be applied by interpolation, a correction should only be applied to a reading.