

Note on Preliminary Opinion from JBA

This note provides a response to the “Preliminary Opinion” prepared by Jonathan Cooper of JBA Consulting and passed by Colin Moss of Trafford Council to representatives of Peel at the end of the morning session of the Examination of the Trafford Core Strategy on 28 February 2011.

It is regrettable that these comments were not provided earlier since our report EX 6401 on the assessment of the condition of the Bridgewater Canal and the overtopping from high flows in the River Medlock were submitted within the timescale for the consultation on the Trafford Core Strategy DPD1 on 2 November 2011.

The Preliminary Opinion in Section 4.2 states that “HRW were offered the SFRA models ... but it appears that they have used an older model...” This is misleading. The initial request for access to the SFRA models was made through Peel on 25 August 2010. We encountered a series of delays in obtaining responses from staff at JBA through their engagement on other work, delays awaiting decisions to be made by the AGMA, and slow response to e-mails on this issue from Trafford Council and JBA. Eventually there were unresolved restrictions in the SFRA data licensing agreements. The net effect was that although Peel as the Drainage and Navigation Authority had agreed to pay the JBA fees requested for access to the SFRA models and agreed to the AGMA requirement to provide a copy of Peels’ models at the end of the work; we were unable to obtain a copy of the SFRA models by mid October. Whilst this dialogue was in train with JBA and Trafford Council, we had obtained LiDAR survey of the land adjacent to the Bridgewater Canal from the Environment Agency, the model of the Medlock in the Potato Wharf area from Scott Wilson and a the current flood model of the Manchester Ship Canal (MSC) from the Environment Agency. On 12 October I took the decision to work with the information we had obtained at this point which covered all the appropriate watercourses since there were just 3 weeks remaining of the statutory consultation period to complete our model building and application and prepare reports on our findings to include with the representations by Peel. If we had been able to access the SFRA models then these would have been checked against the information we used but this did not prove possible. The Environment Agency model of the MSC included inflow from the River Medlock which was nearly identical to that used in the Scot Wilson model; we used the higher of the two flows in our work.

The Preliminary Opinion is misleading where it suggests in Para 3.1 in discussing the condition inspection of the Bridgewater Canal that we “write off the risk as low or very low”. The descriptions “low” and “very low” relate to the annual probability of a breach forming using the consistent language of the whole assessment (See Section 3.1 of report EX 6401). It is fundamental to understand that these are not statements of “risk” since they treat the probability of occurrence of the breach formation alone, not the consequences. The risk is determined from modelling the effects of a breach in causing inundation and damage. Moreover we do not “write off” the probability. Rather we have provided our advice on the best available understanding of the relationship between asset condition and the likelihood of failure; this is clearly laid out in Section 3.3 of our report EX6401 which was submitted as an annex to Peel’s representations on 2 November 2010.

Section 3.2 of the Preliminary Opinion describes the 9 hours response time to seal the Bridgewater Canal as “highly optimistic”. No evidence is offered for why this opinion should override the understanding of the Navigation Authority of its ability to respond to emergencies. The Navigation Authority considers that 9 hours is a conservative timescale to insert the stop logs in the event of a breach occurring, see Section 13.3.2 of the report EX6401 which was submitted as an annex to Peel’s representations on 2 November 2010.

Regarding the flood flows from the River Medlock it is my understanding that the higher discharge figures quoted in the Preliminary Opinion have not been communicated on any other occasion to Peel as the Navigation and Drainage Authority for the Bridgewater Canal and the Manchester Ship Canal.

As noted above, the Environment Agency model and the Scot Wilson model included very similar flows for the River Medlock and we included the higher flow.

It is my understanding that the Engineering Manager of Peel has no record of flooding in the Pomona Dock area arising from the events illustrated as causing flooding further upstream in the Preliminary Opinion. At this point it is pertinent to note that the modelling undertaken in the SFRA (see p 38 of the Level 2 SFRA) indicated that the rate of overtopping from large floods entering the Bridgewater Canal decreases rapidly away from the junction with the River Medlock in the Castlefield area.

I agree that the overtopping of the Medlock into the Bridgewater Canal and the MSC is complex; it is my opinion that the best way to understand the flood hazards and risks will be to construct a combined model of all the watercourses in the area covered by the SFRA. This recommendation is made both in the Level 2 SFRA (Executive Summary page ix and also page 13) and in my review of the same document, see Section 7 of the report EX6297 which was submitted as an annex to Peel's representations on 2 November 2010.

Meanwhile it is my opinion that the breach assessment in the SFRA is overcautious and approximate being based on many assumptions and a brief "walk-over" survey. The breach assessment presented by Peel however is based upon an up-to-date topographic survey of the canal and its banks, coupled with an objective assessment of the condition of the canal system.

Clearly there will be benefit for any future revision of the SFRA and flood mapping in the AGMA area to be undertaken in full consultation and partnership with the statutory Navigation Authorities and Drainage Authorities which have responsibility for the safe operation and maintenance of the watercourses. This should ensure that the evidence base developed for planning decisions is sound, being based upon best available information available from all the relevant stakeholders.

Paul Samuels MA PhD, CEng, CMath, FIMA, MICE, MCIWEM
Technical Director
HR Wallingford

09 March 2011