

Cerys Jones

From: Nutt, Neil G <Neil.Nutt@mottmac.com>
Sent: 27 October 2015 09:54
To: Stephenson, Lucy
Cc: Gammond, Philip A; Sinclair, Adam G
Subject: RE: Five Fords modelling query

Lucy

Your points are correct. I have reaffirmed this by inserting comments below in green.

- the new bridge has been put into the model as 10m long (the oblique length of the bridge) at 29.14 degrees, giving it an effective width between the abutments, i.e. perpendicular to the flow, of 8.73m; **Correct**
- this is wider than the existing bridge width (modelled as 7.7m) but the new bridge will have a solid parapet to restrict flows, and although out-of-bank flows will spill around the bridge (and its parapet) across the access roads on either side, this has been modelled (using a spill unit, which is effectively a weir unit with a variable crest that extends across the floodplain [in this case the centre line of road]), and the outputs show very similar stage-discharge relationships for existing and proposed bridges as shown in Figure 4.1 (pdf page 20). **Correct**

If you want to discuss further please do not hesitate to contact me.

Kind regards
Neil

Neil Nutt
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Engineer



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From: Stephenson, Lucy [<mailto:Lucy.Stephenson@cyfoethnaturiolcymru.gov.uk>]
Sent: 27 October 2015 08:51

To: Nutt, Neil G

Subject: Five Fords modelling query

Hi Neil,

Thankyou for taking the time to answer my queries yesterday regarding the modelling for the new DCWW bridge at Five Fords, and for your email.

Just to be sure I've understood, please can you confirm the following:

- the new bridge has been put into the model as 10m long (the oblique length of the bridge) at 29.14 degrees, giving it an effective width between the abutments, i.e. perpendicular to the flow, of 8.73m;
- this is wider than the existing bridge width (modelled as 7.7m) but the new bridge will have a solid parapet to restrict flows, and although out-of-bank flows will spill around the bridge (and its parapet) across the access roads on either side, this has been modelled (using a spill unit, which is effectively a weir unit with a variable crest that extends across the floodplain), and the outputs show very similar stage-discharge relationships for existing and proposed bridges as shown in Figure 4.1 (pdf page 20).

Thankyou,

Lucy.

Lucy Stephenson

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