

APPENDIX F

NFM ASSESSMENT CALCULATIONS

OVERVIEW

This appendix contains additional detail to explain how the calculations described in Section 3.2.4 of the report were carried out. The purpose of the calculation was to adjust the values of modelled flood peak reduction associated with implementation of floodplain reconnection measures in individual reaches using the modelled flood peak reduction associated with implementation of floodplain reconnection measures in the entire water body. This was to account for the fact that the effect on the flood peak from implementing measures in multiple reaches within a water body is not necessarily the sum of the effects from implementing measures in each reach individually.

CALCULATIONS APPLIED

The change in peak discharge when floodplain reconnection measures were implemented in all sub-reaches within the water body was used as a measure of its overall floodplain reconnection potential. The change in peak discharge resulting from a floodplain reconnection measure in an individual sub-reach was then adjusted in relation to the overall water body potential as follows.

For each water body, the sum of all changes resulting from floodplain reconnection measures in individual sub-reaches was calculated.

The change resulting from floodplain reconnection NFM measures within each individual sub-reach within the water body was divided by the total and then multiplied by the modelled change resulting from implementing measures in all reaches. This is described by the formula below:

$$\Delta q_{rx} = \Delta Q_{wb} \frac{\Delta Q_{rx}}{\sum_{r=1}^n \Delta Q_r}$$

where Δq_{rx} is the adjusted flow change in reach x ; ΔQ_{wb} is the flow change under the scenario of implementing NFM measures throughout the water body; ΔQ_{rx} is the flow change under the scenario if implementing NFM measures in reach x ; n is the number of reaches in the water body. This calculation was carried out for both absolute and percentage changes. The adjusted scores are shown in Appendix E.