

Appendix F Flood Risk Assessments

The following section is an extract from Chapter 6 of the A96 Dualling Programme Strategic Flood Risk Assessment (SFRA) Report, 2015 produced by CH2M HILL Halcrow outlining the process for the scoping and the assessment of flood risk assessments.

DMRB Stage 2

Scoping

A scoping exercise will be undertaken to determine the level of assessment required. An assessment will be required if the answer to any of the following questions is 'yes':

- *Will the project affect an existing watercourse or floodplain?*
- *Will the project change the natural/ existing land drainage catchments?*
- *Does any element of the project extent fall within the SEPA 2014 Flood Maps (medium likelihood of flooding)?*
- *Will earthworks result in the potential for sediment being carried to watercourses?*

Where none of the scenarios noted above are likely, a flood risk assessment will not be considered essential. If there is any doubt, an assessment should be carried out.

Simple Assessment

The simple assessment is a desk-based qualitative assessment considering the following factors:

- *Identification of receptors sensitive to flood risk;*
- *Hydrological assessment of design flows and drainage paths (existing and proposed) using standard Flood Estimation Handbook (FEH) methods;*
- *Estimate culvert conveyance capacity (existing and proposed).*

Where the simple assessment identifies that proposed dualling works are unlikely to present adverse impacts on flood risk, no further assessment will usually be required. At locations where sensitive receptors are identified and/ or A96 Dualling is a potential source of change in flood risk, a detailed assessment may be required. Detailed assessments are usually undertaken at DMRB Stage 3, but may be applied at DMRB Stage 2 where determined necessary.

DMRB Stage 3

Detailed Assessment

Detailed assessments usually build on desk-based DMRB Stage 2 exercises, supplemented with information collected on site, to enable a more detailed, site-specific quantitative assessment; potentially including specialist surveys. The following elements are likely to be required:

- *Detailed hydrological assessment;*
 - *Hydrological modelling to improve the design flow estimation;*
- *Hydraulic modelling of the watercourse/ floodplain;*
 - *To determine the existing flood extent/levels;*
 - *To assess the potential impacts of the proposed works;*
 - *To design (re-design) flood mitigation measures for proposed works.*

The level of detail in the applied methodology should be commensurate with the level of risk any proposed dualling works present.