

Board 5: Background to the Hydrology & Hydraulic Modelling

Information Input to Computational Model

Computational river models consist of the following information:

- Ground and road levels, gathered using survey and remotely sensed data (Figure 5-1);
- River sections, which are gathered through survey of the river channel (shown in Figure 5-2); and
- Information on historical flows in the river, gathered from the gauging station in Newton Stewart (Figure 5-3).

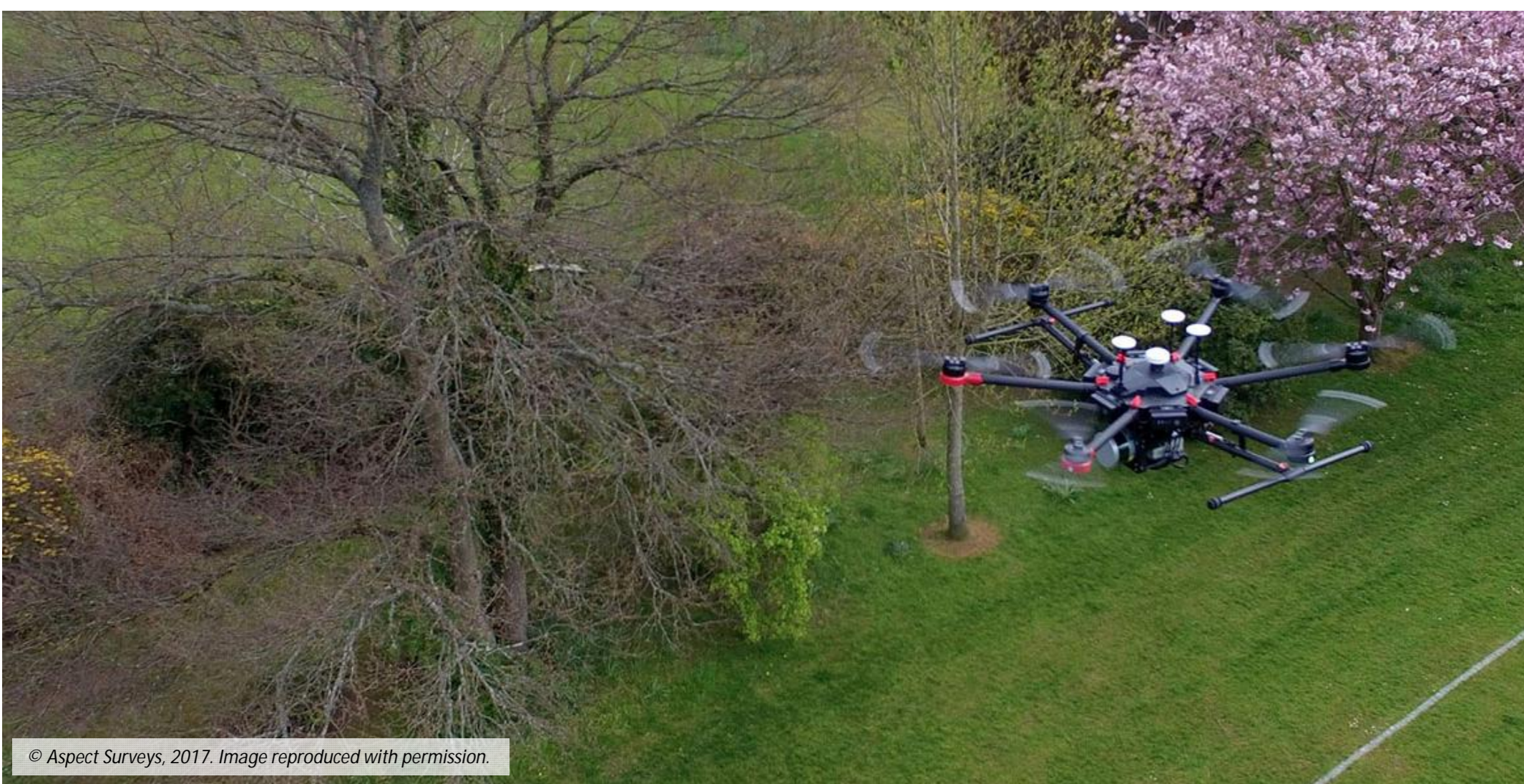


Figure 5-1: Drone for Remotely Sensing Ground Levels

Cross-Section Data: CR007

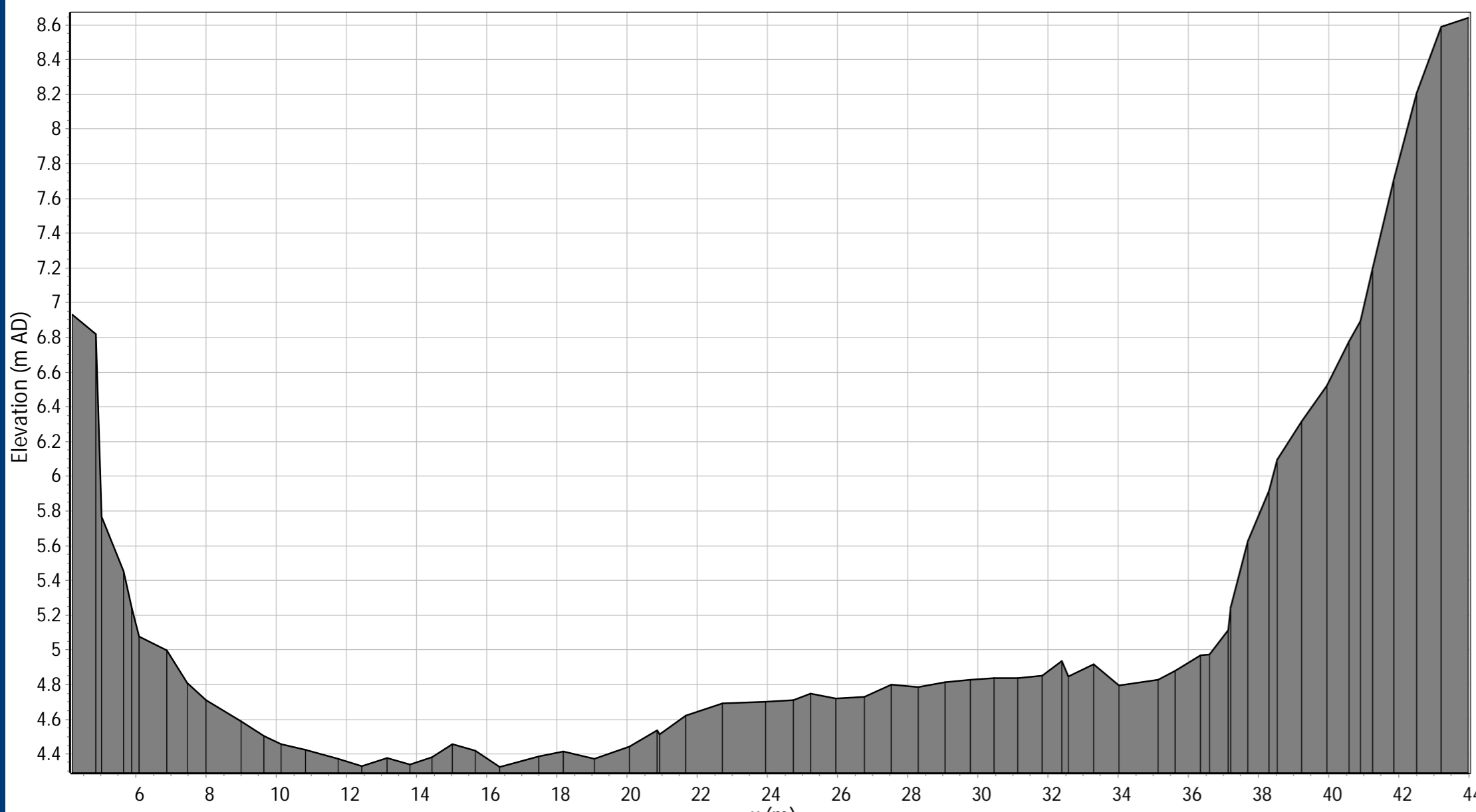


Figure 5-2: Example of 1D Cross Section from River Cree

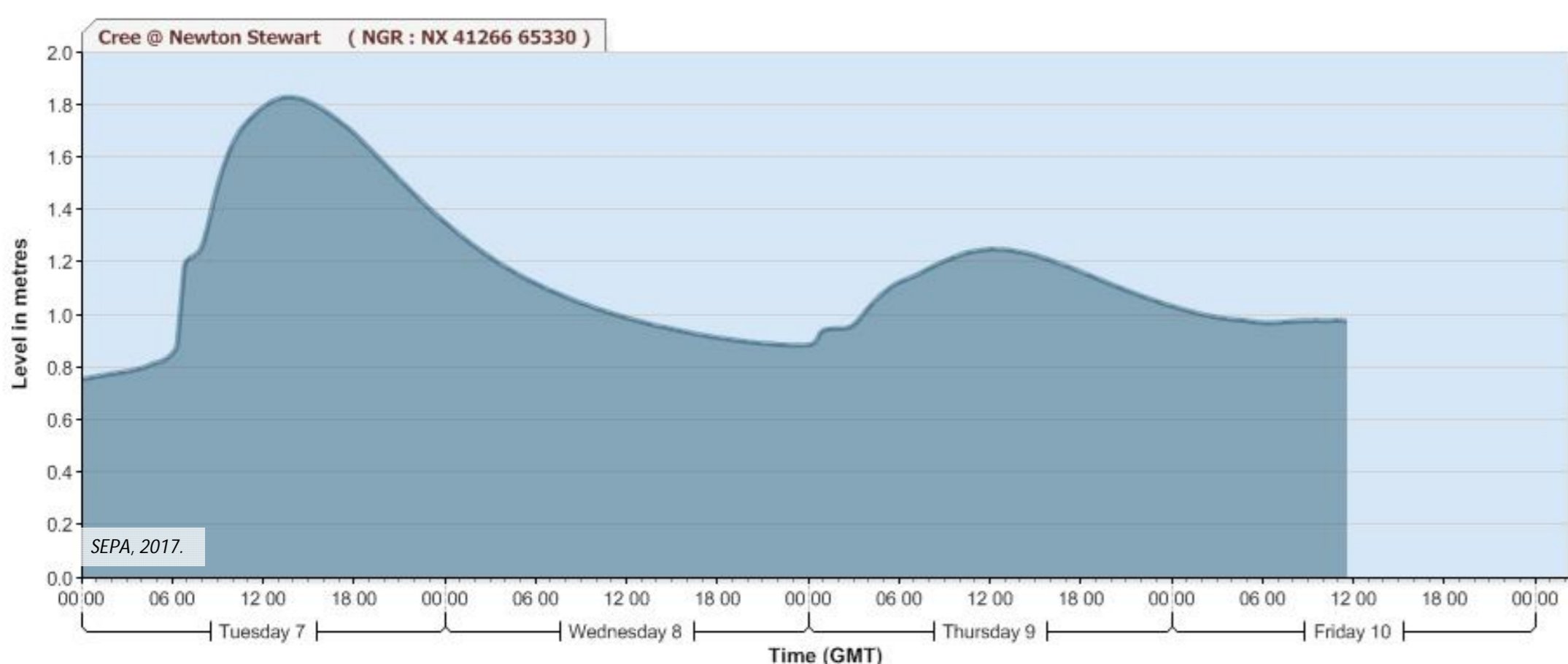


Figure 5-3: Output Data from Gauging station at Newton Stewart

Information Output from Computational Model

The river model produces the following:

- Water levels and velocities along the river
- Mapping to indicate areas of flooding (Figure 5-4).

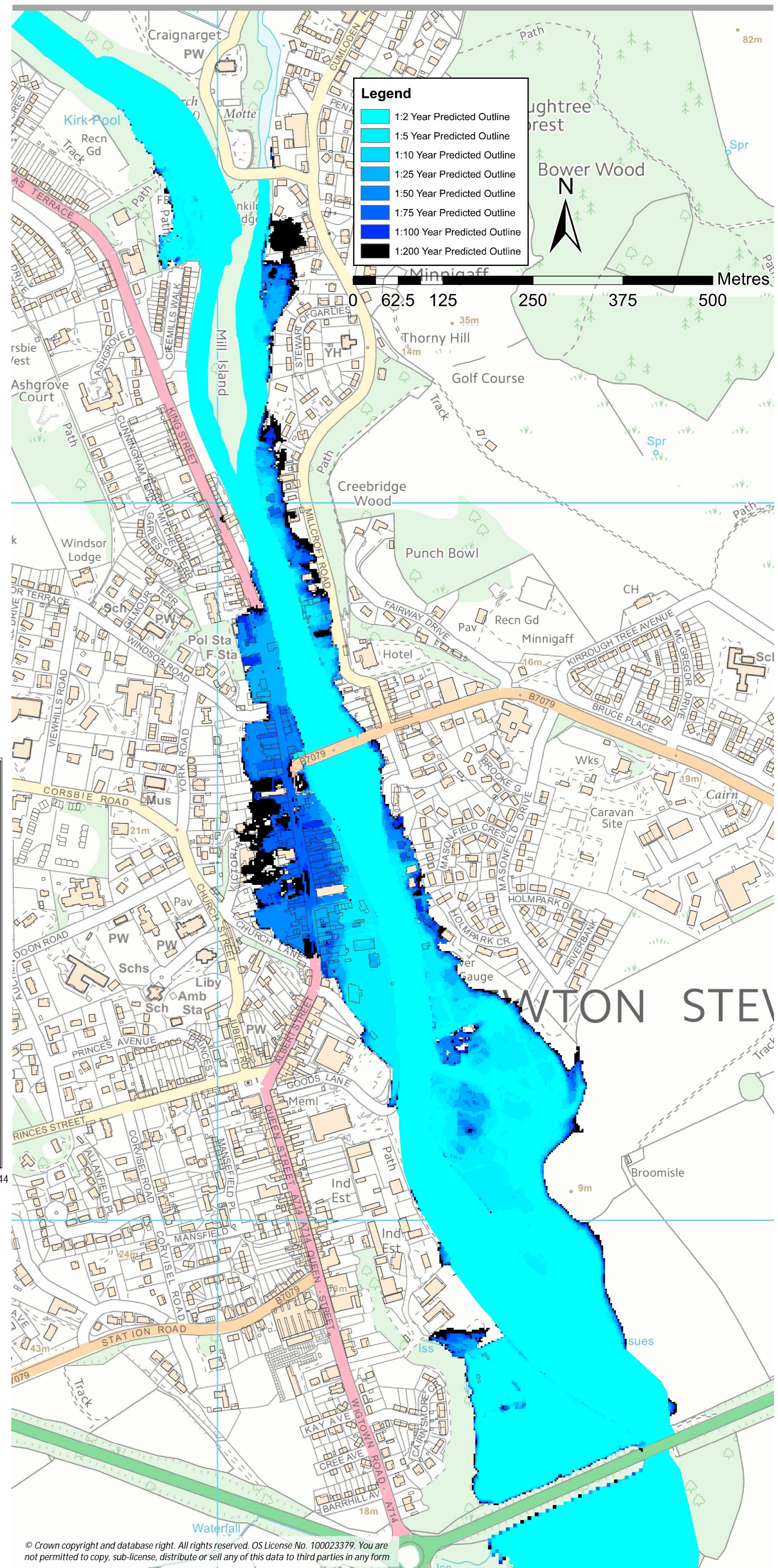


Figure 5-4: Baseline Predicted Flood Outlines