

2: Project Progress

What Work Has Been Undertaken to Date?

A significant amount of work has been carried out to determine flood risk to the southern area of Kinross and develop potential options for managing this risk. This has involved several detailed assessments including:

Data Gathering and Analysis - the Council, the local community and SEPA have provided all relevant data, including records of previous flooding in the area.

Site Walkovers - various site surveys have been undertaken to record the features in the catchment.

Topographic Surveys - ground and property threshold levels have been gathered to improve and refine the hydraulic model of the watercourses.

Hydrology - the river flows have been checked and are based on the most up to date recorded gauge data (where available) and national guidance. The flows have been independently agreed by SEPA.

Hydraulic Modelling - a hydraulic model of all relevant watercourses has been developed. The model has been used to determine the current level of flood risk and the required height, extent and type of potential flood defences. The model has been verified by comparing the results with historic flood events.

Ground Investigations - a preliminary ground investigation was carried out to determine the ground conditions, the likelihood of groundwater seepage and to assess the stability of any proposed flood defences. Investigations were also undertaken to establish the exact location of utility services in the area.

Utility Services - Information has been collected and forwarded to the relevant service operators to assess the potential need for, and cost of, protecting or diverting utility services.

Economic Appraisal - the outline costs and predicted benefits offered over time by each of the options has been assessed (cost benefit analysis). The cost of the scheme must not exceed the benefits, i.e. the benefit/cost ratio must be greater than 1.0.

Environmental Assessment – ecological surveys have been undertaken and an Environmental Impact Assessment has been prepared.

Fluvial Geomorphology Analysis – to consider the changes to the river channel due to the movement of sediment and erosion.

These assessments have informed the development process outlined in Figure 3.

Option Development

A number of flood risk management options have been tested in the river model. The results have been analysed to determine if each option is feasible or not and the potential impact on flood risk elsewhere.

The flood affected area was split into three separate flood cells, as shown in Figure 4, due to the unique flooding mechanisms and constraints observed in each.

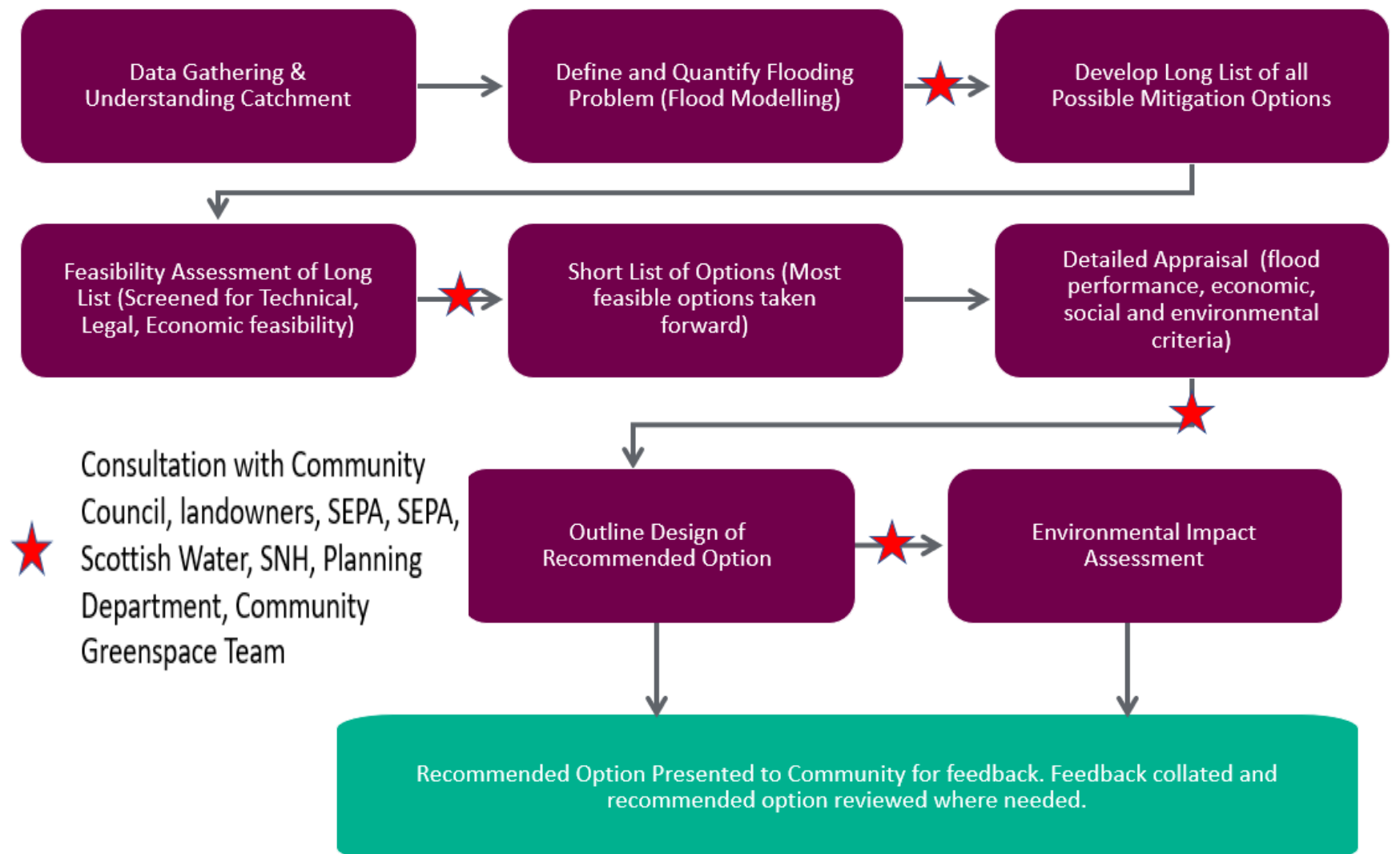


Figure 3: Work Done to Date Flood Cells 1-3 for Option Development

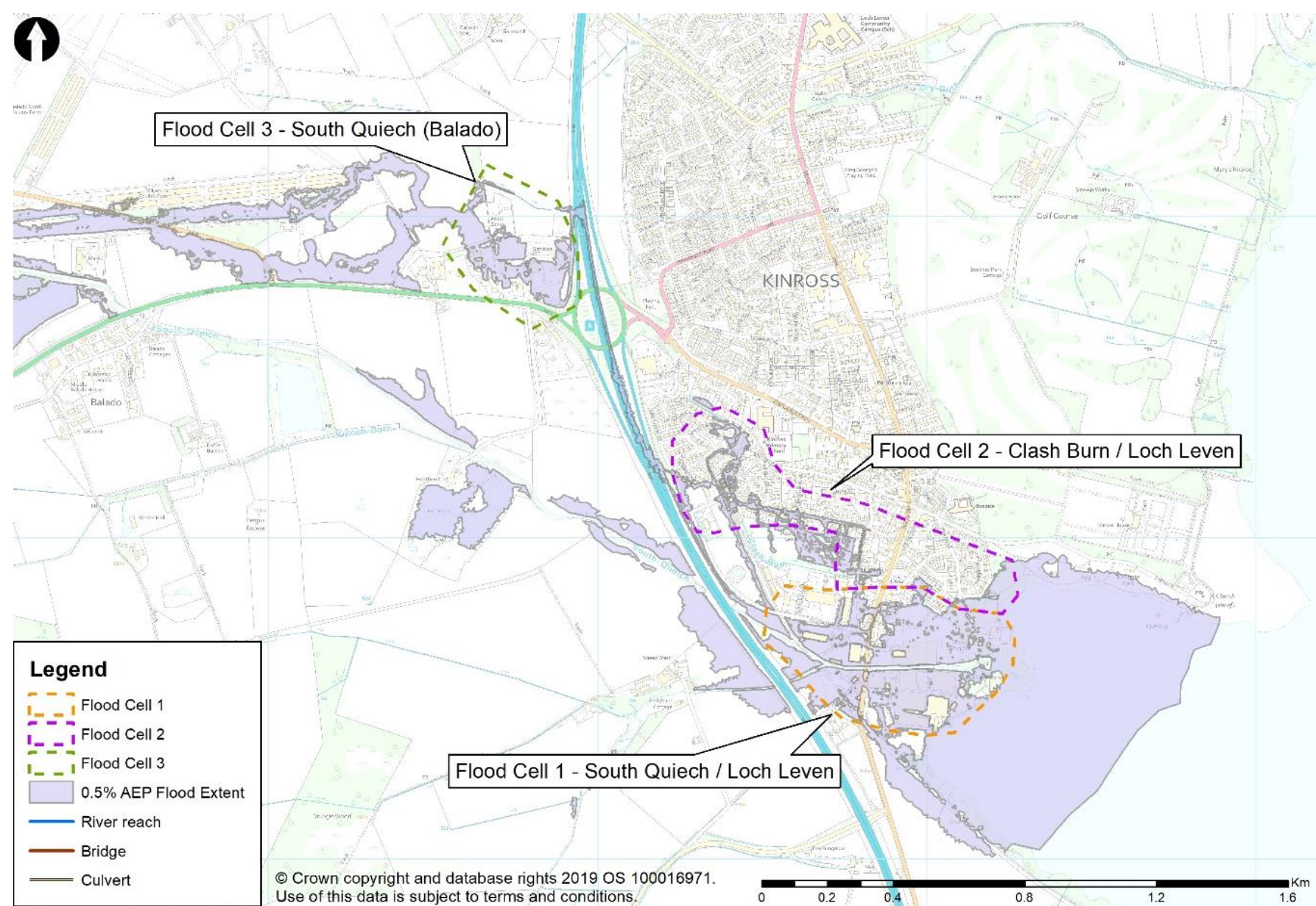


Figure 4: Flood Cells 1-3 for Option Development