

**Public Exhibition - South Kinross Flood Protection Scheme** 2-8pm, 28 September & 5 October 2023

## 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 & **Define and Quantify Flooding** ⇔ Problem (Flood Modelling) **Understanding Catchment** Data Gathering and Analysis - the Council, the local community and SEPA have provided all relevant data, including records of previous flooding in the area. Short List of Options (Most Feasibility Assessment of Long List (Screened for Technical, feasible options taken Site Walkovers - various site surveys have been undertaken to record the Legal, Economic feasibility) forward) features in the catchment. **Topographic Surveys** - ground and property threshold levels have been Consultation with Community gathered to improve and refine the hydraulic model of the watercourses. Council, landowners, SEPA, SEPA, **Outline Design of** Hydrology - the river flows have been checked and are based on the most Scottish Water, SNH, Planning **Recommended Option** up to date recorded gauge data (where available) and national guidance. Department, Community The flows have been independently agreed by SEPA. Greenspace Team Hydraulic Modelling - a hydraulic model of all relevant watercourses has been developed. The model has been used to determine the current level Recommended Option Presented to Community for feedback. Feedback collated and of flood risk and the required height, extent and type of potential flood recommended option reviewed where needed.

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

Develop Long List of all

Possible Mitigation Options

Detailed Appraisal (flood

performance, economic,

social and environmental

criteria)

**Environmental Impact** 

Assessment



## protecting or diverting utility services.

historic flood events.

services in the area.

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.

defences. The model has been verified by comparing the results with

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

Utility Services - Information has been collected and forwarded to the relevant service operators to assess the potential need for, and cost of,

**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 4: Flood Cells 1-3 for Option Development



