Forres (Burn of Mosset) Flood Alleviation Scheme: Delivering Sustainable Flood Management

The case for protecting Forres from the Burn of Mosset was clear, but identifying and promoting the preferred solution was nonetheless a challenging process. Consultation, investigation and appraisal were used to develop the scheme. A literature and historic review of Forres’ flooding problem was undertaken. Consultation with individuals affected by the flooding provided valuable local knowledge on flood mechanisms and flood risk areas. These investigations and surveys formed the baseline for the option development and the appraisal process.

The preferred flood alleviation solution was identified by evaluating the options against a wide range of criteria, including cost and sustainability. Sustainability was evaluated with reference to the guidance document “Rethinking Sustainability”, which was developed specifically for the Moray Flood Alleviation projects. The guidance provides a framework for assessing sustainability as a balance between economic, social and environmental factors. At the time, it received significant praise from the Scottish Environment Protection Agency.

Purpose of the project
Royal Haskoning, working together with The Moray Council, Morrison Construction & EC Harris under the banner of Moray Flood Alleviation, delivered the Forres (Burn of Mosset) Flood Alleviation Scheme, Moray, Scotland. Forres has a long history of flooding from the Burn of Mosset and five flood events have occurred in the past 50 years. The scheme was designed to protect approximately 800 properties in Forres from the Mosset Burn to a standard of at least 1 in 100 years, including an allowance for climate change.

Description of the project
The scheme comprises a 3,800,000m³ capacity flood storage reservoir combined with minor embankment works through the town. There is also a flood relief channel in the neighbouring village of Rafford which protects 10 properties. The scheme includes several innovative design features, including a baffled crump weir and burn management works. The burn management works utilise cutting edge river restoration techniques to manage development of the burn within the storage reservoir.
An integrated project design team
The outcomes of the project enforce the fact that as a result of the integrated team approach and the involvement of the environment team from the early stages of the project, it has been possible to minimise, and in some cases completely avoid, adverse environmental impacts, as well as delivering a scheme which provides social and environmental benefits.

Community involvement
Consultation with individuals within Forres affected by the flooding provided valuable local knowledge on flood mechanisms and flood risk areas, which fed into the option appraisal and identifying the baseline environment.

Delivering an asset for the community
During the development of the scheme, equal importance was attached to the other 364 days of the year when the flood defence function is not required.

Careful design has integrated the engineering and visual amenity/environmental requirements and delivered a scheme that will be a valuable asset for the community at all times. An example of this was the location of Chapelton Dam, which was in close proximity to Sanquhar Woods, a locally important recreation area well used by locals. With the scheme in place, a network of footpaths was developed to link the surrounding community to the woodland.

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The Forres (Burn of Mosset) Flood Alleviation Scheme has won the Saltire Award for Environmental Sustainable Construction 2010. This commendation recognised the considerable benefit and contribution made by safeguarding the town of Forres from future storm events, constructed with high regard for the environment and its surroundings.

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