This case study will focus on engagement undertaken to gain support for a design solution entailing weir removal to reduce flood risk; a less traditional option than raised defences but in this case with fewer impacts. A range of stakeholders were involved, including: members of the local community, council and heritage groups.

Engagement was particularly important given concerns about cultural heritage and visual impacts and the very public location of the works. Dolgellau is an important historic town with over 200 listed buildings; it is partly covered by a Conservation Area; and is located within Snowdonia National Park. For these reasons, the appearance of any new flood defences was of high concern to the local planning authority and stakeholders.

The main constraints to progressing works on the Afon Aran were the visual impacts of options on the Conservation Area and listed buildings. Listed buildings and sections of walls that provide part of the setting of listed buildings would have been indirectly affected by raising walls. There was a lack of information about the existing structures; limited working space for construction; and, a number of properties in close proximity to the channel.

Other issues included archaeology, fisheries and invasive non-native species (INNS).

The project to remove the weir came about as part of a £4.2M flood alleviation scheme to provide 150 year flood protection to 320 properties in Dolgellau (Gwynedd, Wales).

It became apparent during modelling for the design that – aside from flood risk posed by the main river (the Afon Wnion) – overflow routes from a tributary (the Afon Aran) also needed to be addressed to protect the town centre. Two options considered for reducing flood risk were raising existing riverside walls, or removing an old weir to lower the upstream water level.

The weir option was developed and consulted on in Mar-Jul 2014 and construction undertaken (as permitted development in advance of the main works) in Sep/Oct 2014. The Afon Aran is a small, flashy watercourse on the east of the town centre with its source 800m higher, on the western end of Cadair Idris. The weir dated from the late 1800s and was associated with the town tannery and various milling activities.

Important receptors and issues for the project were: flood risk, listed buildings, cultural heritage/archaeology, geomorphological changes, public access, fisheries, and INNS.
Lessons learnt

On proposing the weir removal option, there was some initial opposition and resistance from the Town Council, and concerns from the local Heritage Group based on the risk to historic conservation. This suggested that there needed to be an open discussion of the impacts compared with the only other feasible option of wall raising.

To present the information in an approachable format, a non-technical briefing note was prepared jointly by the designers and environmental lead, and tailored to the questions that the stakeholders were concerned with. This explained the specific flood risk problem, the importance of finding a solution, and explained the two feasible options with their advantages and risks. The briefing note was provided to the Town Council, Heritage Group and selected local landowners. Discussion meetings were then arranged with the local stakeholders to answer any questions they had, and to help build consensus on the best option. These were well received, and agreement was consequently reached to progress the weir option.

The weir removal part of the scheme was progressed under permitted development (as advance works); but was still included in the non-statutory environmental report; along with an archaeological assessment requested by Snowdonia National Park Authority to inform consideration of potential impacts and mitigation…(cont.)

Lessons learnt cont. –

…Gwynedd Archaeological Trust (GAT) undertook an assessment (desk study and initial field survey) to identify and record cultural heritage features, evaluate their importance and recommend mitigation. This concluded that the weir structure and associated walls/features are not listed or protected, but are of district or local importance and form part of the local character.

A detailed archaeological record was recommended during weir removal and a watching brief for works to parts of the walls. The record was made prior to and during removal in Aug-Sep 2014. This included: a detailed plan prior to removal when the channel was dewatered; taking a section through the earliest part of the weir; and, a photographic and written record documenting the structure, use and previous maintenance of the weir.

The oldest parts of the weir were retained on each bank. To further enhance local cultural heritage awareness, an interpretation board is also planned to be located within a local park.

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