Pow Burn Restoration

The Pow Burn is a tributary of the River South Esk with the confluence between Brechin and Montrose close to the normal tidal limit. The Pow Burn forms part of the River South Esk Special Area of Conservation (SAC), an area designated for its importance for Atlantic salmon and Freshwater Pearl Mussel and is classified by SEPA as a diffuse pollution priority catchment.

The Pow Burn has been subject to historic alterations in the form of straightening and dredging of the channel, and the construction of raised flood embankments. These alterations have reduced the quality of the river habitat to an extent that SEPA have identified it as a priority area for restoration, which has led to a restoration design for the burn between Farnell and the River South Esk confluence being developed.

With a grant of £300,000 from the SEPA Water Environment Fund, Esks Rivers & Fisheries Trust employed Envirocentre and McIntosh Plant Ltd to undertake the work.

The design was designed to take into consideration existing land use and productivity of adjacent fields, including maintaining existing access, the functioning of land drainage, and addressing existing flooding concerns. The work consisted on creating 900m of two-stage river banks, which help alleviate flood damage by allowing the water to escape the channel, reducing the flow power, while protecting adjacent valuable farmland. See photos below before and after the work.

Pow Burn before works…

…and after works.

In addition to the two-stage banking, 350m of flood channels were engineered through areas of woodland. These channels do not form part of the burn, but become active during flood events.

Finally, in-stream and bank flow deflectors (see photo below), willow spiling and large wood were introduced to the burn to encourage natural river processes and provide habitat for aquatic species. The flow deflector shown below proved particularly effective, as only 4 weeks after installing a sea trout spawning 'redd' was spotted immediately adjacent to the log, where before the area was unsuitable for any fish spawning.

The morphology of the burn continues to evolve and will be monitored over the coming years.