

Water and the city centre

Water and Bradford City Centre Regeneration

It is now some four years since the original proposals for the regeneration proposed that water should provide one of the main focuses. The work in UWC has been carried out in parallel with other studies by in the city centre, and water remains a key feature. The parallel studies have identified sources of water and specific proposals for the first stage of the regeneration project. This will be a multifunctional piazza with fountains and pools which will be constructed outside the City Hall. Further stages will create a surface stream linking all phases of the redevelopment project and using Bradford Beck as the supply.

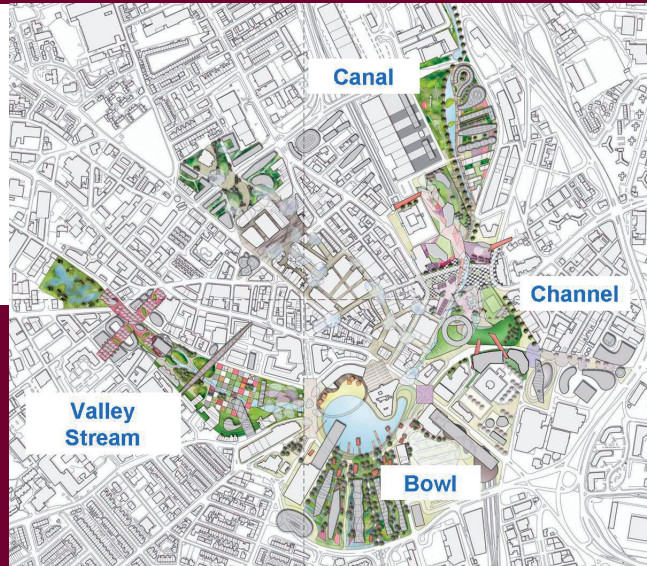
Water quality requirements

The new stream will be small and accessible and because of this there will be a need for a high standard of water quality. The minimum standard will be the mandatory standard of the Bathing Water Directive, but the guideline standard would be preferable.

In addition to the achievement of bacteriological standards there are operational requirements associated with sediment management within the stream channel in which depths and velocities will be controlled by weirs. Therefore, particulate will have to be removed prior to entry into the new system to prevent deposition of sediment and associated pollutants and thus reducing the need for desilting.

The proposed system

The proposed stream will start to the west of the city centre where a new pipe will bring water from Bradford Beck to the surface. A low maintenance screen will prevent large debris from entering the system and blocking the flow control. In addition, a separator will be required to settle out fine particulate so that it doesn't build up behind weirs and in inverted siphons beneath roadways further down the system



There is little doubt that there will be a need to treat the water to achieve the required standards, and wetlands are seen as the best way forwards as they will provide opportunities for biodiversity and education as well as serving their primary purpose. However, there are concerns about the availability of sufficient space for their construction. Here the screen and separator at the inlet to the system remove the need for settlement ponds, but there remains a need to quantify the balance between the volume and flow rate through the wetland and the quality of the inflow in both dry and wet weather.

Further down the stream the flow will be supplemented by discharges from the fountains of the mirror pool, but there will be a need to protect the stream from polluted overland flow in wet weather and street washing in dry weather as there is no desire for it to act as an open drain.

Eventually the steam will flow into the canal, which initially will discharge back into Bradford Beck. However, there are plans to open up the route of the old Bradford Canal right down to the River Leeds - Liverpool canal at Shipley. In this case the stream will provide one of the sources of water.

