

Report of the Strategic Director of Place to the meeting of Environment and Waste Management Overview and Scrutiny Committee to be held on 18 April 2017.

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Subject:

Bradford Beck Pilot Study

Summary statement:

The Bradford Beck Pilot Study was first discussed by members in April 2013 and again in subsequent committees. It was resolved that the ongoing collaboration between officers and Friends of Bradford Beck be supported; also that the Friends of Bradford Beck be congratulated for the work they have undertaken throughout the years. This report outlines progress made in the current financial year 2017-2018.

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1. SUMMARY

Since the Committee meeting of 5th April 2016 there have been a number of meetings and developments between Council Officers in various sections and Friends of Bradford's Becks (FOBB). This report outlines the work carried out over the last year in collaboration to the catchment plan produced by FOBB that was supported by the Environment and Waste O&S Committee in 2013.

2. BACKGROUND

During the course of the year there have been numerous meetings and developments involving FOBB and Council Officers in relation to Bradford Beck. These are listed below:

- I. Following the devastating floods of Decemeber 2015 it was recognised that there was a need need for a long term strategic approach to managing flood risk and associated envionmental impacts across the Bradford district. In idenitifyng this need the Council have worked with the Environment Agency to scope and develop a Bradford Flood Programme Board. The board agreed that, alongside ongoing scheme development, it is a priority to focus on identifying and delivering cost-beneficial solutions to areas within the district that are at risk of flooding. The Programme Board were able to secure local levy funding to help deliver aspirations and the following work has been funded through this govenernece structure.
 - In collabaoration with FOBB and the Aires River Turst, funding was secured to carry out River Stewardship works such as litter picking, vegetation removal and bank maintainence within the River Aire and is tributaries. The first clean up day took place on the 25th March 2017 and consentrated on the reach of Bradford Beck between Poplars Road and Briggate.
 - Working towards a beck naturalisation project, funding has been secured to prepare a flood risk alleviation strategy along the Bradford Beck catchment. The purpose of the study is to investigate the multiple benefits that flood risk schemes could deliver in improving flood risk, providing environmental benefits, assisting in maintaining and achieving Water Framework Directive objectives, enhancing the transport links to and from the city centre, provide biological enhancements and creating open space to encourage social community benefits within the Shipley and Canal Road Corridor alongside Bradford Beck. One aspect of this study is continuing the good work by FOBB in developing a re-naturalisation scheme on Bradford Beck between Poplars Road and Briggate.
- II. The re-naturalisation works also form part of the successful funding bid to the EU North Sea Interreg Vb programme project BEGIN (Blue / Green infrastructure through social innovation) which was approved in early September 2016 to EU North Sea Region Secretariat; The Lead Partner being the Municipality of Dordrecht in the Netherlands. The scheme is in its early development but will help support the aspirations of the Councils Green Infrastructure Study. The emerging approach in respect of Green Infrastructure and flood risk is based on the creation of a Linear Park along the length of Bradford Beck, restoring the natural character of the beck,



retaining areas of natural floodplain, introducing new areas and enhancing existing areas of greenspace whilst incorporating sustainable drainage within new developments. The BEGIN project also has linkages to the West Yorkshire Combined Authority Transport plan and the Leeds City Region Environmental Programme.

- III. The Bradford District Local Flood Risk Management Strategy (LFRMS) has been before this committee and is due to be published shortly. The LFRMS gives consideration to the wider environmental objectives of Flood Risk Management (Section 10) and the LFRMS is to be used to promote the opportunities of managing catchments in an environmentally sensitive way. For example, using blue and green corridors for flood flow pathways, upstream attenuation and land management can deliver other environmental amenity and economic benefits. To ensure that the LFRMS contributes to wider environmental objectives required under the Water Framework Directive (WFD) and the Strategic Environmental (SEA) Directive, the LFRMS was produced to align with the Sustainability Appraisal of the Bradford Core Strategy (Draft) and a Strategic Environmental Assessment (SEA) of the LFRMS was undertaken.
- IV. To help achieve these objectives Bradford Council is developing a strategy to deliver Natural Flood Management (NFM). NFM schemes offer multiple benefits in catchments upstream of problem locations through upland attenuation, small wetlands, farmland management, large scale upstream wetlands and attenuation basins. Bradford Council will work towards the whole catchment based approach in regard to flood risk management and in specific regard to NFM, will identify areas within the District where NFM projects could be developed and implemented to contribute towards the NFM evidence base on a river catchment level whilst working to reduce flood risk on a local level. Several areas known as Rapid Response Catchments (RRC) have been identified including Pitty Beck which is a tributary to Bradford Beck. The Council intends that this work will interlink with the objectives of FOBB.
- V. As an outcome of the Floodhack event organised by the Open Data Institute Leeds, following the December 2015 floods, LoRaWAN (Long range wide area network) coverage of the city centre and Canal Road corridor has been established to facilitate 5 sensors in measuring water levels on Bradford Beck and its tributaries. Currently 2 are in place and sending live updates which can be viewed on the 'Flood Network' <https://map.flood.network/> together with Environment Agency water level gauges on the Beck and River Aire in Shipley. The data are also published as open data on DataMill North, and the LoRaWAN network is 'open' and available for anyone to use free of charge via 'The Things Network Leeds – Bradford'.

The network can provide live information on flood risk and the data can be used in conjunction with rainfall measurements from Council gauges in Thornton and Britannia House to gain a better understanding of the performance of Bradford Beck and the flood alleviation tunnel.

This Internet of Things (IoT) infrastructure can be used for many other purposes



and provides a resource for the Council, academic researchers, local businesses and the public. It is also a key part of the proposed European Interreg NSR project SCORE (Smart Cities and Open REuse of data).

The Friends of Bradford Becks have worked on a broad range of projects over the year and a copy of their activities for 2016 – 17 is included as appendix 1. This is complimented by the advice leaflet produced by FOBB's this year that warns on the results of misusing drains for waste disposal. The leaflet is titled the 'Ten Point Plan' and is presented within appendix 2.

Although not formally approached to provide content, the Environment Agency have made two representations that are considered appropriate to the context of this report and these are therefore included below for information.

1. FOBB Pollution Monitoring and Investigation project;

Friends of Bradford Beck and the Aire Rivers Trust are undertaking a citizen science pollution investigation project across 12 locations on Bradford Beck, supporting EA Land and Water team, and Yorkshire Water in identifying areas of concern and supporting their investigations into pollution.

FOBB pollution investigator is regularly monitoring visually and with basic sampling kits across Bradford.

As part of this project there is also an education and engagement programme being delivered this year with schools visits and a walks guide in development.

2. EA Analysis and Reporting Team CSO Investigation;

Our colleagues have installed two continuous monitors on Bradford Beck to investigate potential CSO issues (Combined Sewer overflows), these monitors now link not only with our pollution response team, but with FOBB, this means we have more eyes on the ground for getting better results from this investigation.

There are two monitors; the sonde at Shipley is attached to the flow gauging station and the sonde at the university is securely located within the undercroft of the YMCA Culture Fusion building.

The two sondes installed for this EA Analysis project gather evidence to influence Ofwat's PR19 process, which is where we have the opportunity to influence Yorkshire Water's future programme (for 2020- 2025). Our team review the data periodically, with a view to making a decision on next steps by June.

Live data is available here;

www.telemetry-data.com/open?profile=BradBeck



3. OTHER CONSIDERATIONS

The Environment Agency has been approached on pollution incidents that have been reported on Bradford Beck and its tributaries. This data is included within appendix 3.

4. FINANCIAL & RESOURCE APPRAISAL

None

5. RISK MANAGEMENT AND GOVERNANCE ISSUES

None

6. LEGAL APPRAISAL

None

7. OTHER IMPLICATIONS

7.1 EQUALITY & DIVERSITY

None

7.2 SUSTAINABILITY IMPLICATIONS

None

7.3 GREENHOUSE GAS EMISSIONS IMPACTS

None

7.4 COMMUNITY SAFETY IMPLICATIONS

None

7.5 HUMAN RIGHTS ACT

None

7.6 TRADE UNION

None

7.7 WARD IMPLICATIONS

None

7.8 AREA COMMITTEE ACTION PLAN IMPLICATIONS (for reports to Area Committees only)



Not applicable

8. NOT FOR PUBLICATION DOCUMENTS

None

9. OPTIONS

None

10. RECOMMENDATIONS

1. That Yorkshire Water and the Environment Agency be recommended to undertake a full investigation of sewage related pollution sources in the Bradford Beck catchment in the next investment cycle.
2. That the Friends of Bradford's Becks and the Strategic Director, Place be requested to work jointly on studies and proposals for the Canal Road Area.
3. That the Friends of Bradford's Becks be invited to report back in a year's time.
4. That Document AH be noted and that the ongoing collaboration between officers and the Friends of Bradford's Becks be supported.

11. APPENDICES

Appendix 1 - Friends of Bradford Becks summary of activities 2016 – 17

Appendix 2- Friends of Bradford Becks Ten Point Plan

Appendix 3 - Environment Agency Pollution Incidents 2016- 17

12. BACKGROUND DOCUMENTS

Bradford's Becks – a New Lease of Life

Available online from:

<http://bradfordbeckdotorg.files.wordpress.com/2013/02/bradfordsbecksfinalweboptimised.pdf>

