



## Application form

### Cherishing the rivers to which we belong

Each year the Prix Charles Ritz rewards a trophy and a cheque for works undertaken with devotion and commitment by individuals/communities who make a difference to the rivers they cherish.

This year, the Fario Club, London, has established the Prix Charles Ritz award for England and Wales, to honour projects here helping to preserve our rivers for future generations.

All applications with projects undertaken in England and Wales are accepted. Please 4 pages maximum + attachments. You may apply by e-mail to [prixcharlesritz@gmail.com](mailto:prixcharlesritz@gmail.com) by the 31st August 2019

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| <b>Individual/ Club / Organisation:</b><br>Friends of Bradford's Becks (FoBB)   |
| <b>Project name:</b><br>Urban Pollution Hunter  |
| <b>Date of completion:</b><br>August 2019   |

**Project objectives – what did you do and why? Why was there a need for the project? [For restoration projects please include location and background]**

## The Need

Bradford Beck was once instrumental in bringing prosperity and industry to Bradford, Yorkshire, when the city was the world's foremost producer of woollen and worsted cloths. Such industry took a heavy toll on the Beck which remained heavily polluted until the decline of the textile industry in the 1980's. Until then, no fish were present in the Bradford Beck and pollution warning signs dotted the banks. Although greatly improved since the 1980's, Bradford Beck remained in a poor ecological state, largely ignored and forgotten.

Like many urban becks Bradford Beck suffers from malfunctioning sewers and misconnections. As well as chemical pollution, particulate material is harmful to fish whether in suspension (e.g. interference with gill function) or when deposited on the stream bed (e.g. homogenisation of microhabitat or reduced intra-gravel oxygen supply that is vital for trout eggs as well as many invertebrates).

Bradford Beck was classified by the Environment Agency as "having poor ecological status" and this was borne out by anecdotal observations of few fish and birds in the Beck, foul smells reported around the Beck and pollution incidents reported by FoBB members.

Particular credit should go to one of our volunteers, Robert Hellawell, a local angler dismayed by the decline of wild brown trout and the increasing levels of pollution in Bradford Beck. Robert's ceaseless commitment to the project has been one of the key drivers for its success.

**How have the objectives been achieved? (If appropriate please relevant documents for example before and after photos, monitoring results and/or press coverage)**

## The Project

A low cost / low tech citizen science project with a big impact. The project established that a large proportion of the Bradford Beck catchment could be monitored with observations at just 12 strategic points along the course of the Beck, so observations would be made at all 12 points on different days of the week and at different times of day.

Observations were only be made during low flow conditions. This eliminated any concerns of pollution that may arise from natural sediment in the water during high flows and also those episodes of permitted sewage discharge into the Beck from CSO triggering following rainfall events.

A record of the status of the Beck at each point was taken. This included the level of the water, colour of the water, smell, turbidity and a photograph of each site.

Using this approach, FoBB endeavoured to record and track the source of pollution entering the Beck.

Of particular interest was the glowing tampon test developed by one of FoBB's members that was used to quickly identify determine if a found source of pollution contained optical brightening agents as found in laundry detergents and was therefore related to either domestic sewage or a domestic misconnection (BBC Newsbeat - Glow-in-the dark tampons

could help make our rivers cleaner (<http://www.bbc.co.uk/newsbeat/article/32129590/glow-in-the-dark-tampons-could-help-make-our-rivers-cleaner>).

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## The Outcomes

Improving a water course as densely urban as Bradford Beck may not have the dramatic turn arounds of some Prix Charles Ritz Award applicants. Bradford Beck remains a "poor" watercourse and volunteers found 33 separate pollution incidents at 14 sites over 6 months. In many of these incidents volunteers have been able to identify the sources through a combination of dye testing and searching for the routes of buried culverts and drains by lifting dozens of access covers. Often, they find one of four causes:

- Sewage overflowing from the sewers where Combined Sewer Outfalls have been blocked by rags such as wet wipes or sanitary waste, or malfunctioned.
- Construction site run-off.
- Abuse of surface-water drains such as pouring oil down road-side gullies.
- Misconnections which direct domestic or industrial effluent into surface water drains connected directly to rivers, rather than sending the effluent to sewage treatment works.

## Success

2019 marks an incredibly important milestone for Bradford Beck. A detailed report sent to Environment Agency, Yorkshire Water and Bradford Council by the project and pressure exerted through significant media attention and a high level of social media engagement has changed the course of decades of inaction to improve the Beck.

Both regulator and polluter have heeded FoBB's call that now is the time for action. At the behest of the Environment Agency, Yorkshire Water has included two projects to tackle diffuse pollution in Bradford Beck into its April 2020 Asset Management Plan 7, a document that sets out how it will manage and upgrade its sewage system between 2020 and 2025. They will undertake a detailed study to review the capacity of Bradford's sewage system and work with FoBB to determine the cause of the pollution problems that have been occurring in Bradford Beck.

The video FoBB's Urban Pollution Hunter project shot in August 2019 of brown trout swimming in Bradford Beck (<https://www.facebook.com/watch/?v=2027568870680546>) is proof that this innovative project is paving the way for a sustainable fish population to flourish once again in Bradford Beck.

## Press coverage

As this article about a significant fish kill in August 2018 showed many of the pollution incidents went unnoticed by official monitoring. FoBB has been very successful in bringing these to prominence and pressurising Yorkshire Water into acting (Bradford's Telegraph & Argus - Outrage as stretch of Bradford Beck runs black <https://www.thetelegraphandargus.co.uk/news/16592658.outrage-as-stretch-of-beck-runs-black/>).

FoBB's Urban Pollution Hunter project made both the local and national news with one particular notable pollution incident during 2018/19 when they were instrumental in

identifying a misconnected drain after food waste turned the Beck yellow (Bradford's Telegraph & Argus - 'Curry pollution' among issues faced by Bradford Beck <https://www.thetelegraphandargus.co.uk/news/16163160.curry-pollution-among-issues-faced-by-bradford-beck/> The Mirror - 'River of curry' is flowing through Bradford - and the source has finally been discovered <https://www.mirror.co.uk/news/uk-news/britains-curry-capital-literally-turning-12379736>).

BBC's regional news (Look North) featured FoBB's campaign to identify and pursue pollution in its bulletins on 22<sup>nd</sup> August 2019, as part of a national day of reporting on river pollution issues. (<https://www.facebook.com/groups/BradfordsBecks/permalink/2535263339873079/>)

## What's next?

The Urban Pollution Project is taking a new foray into technology. Recognising that volunteers cannot witness all pollution incidents and often become disheartened by the lack of positives, they are experimenting with new low-cost technological solutions. Two new approaches for detecting pollution incidents will be developed and tested. The first will use the robust, maintenance-free turbidity sensors from washing machines coupled with off the shelf electronics to process the readings. The second uses a digital camera to observe an underwater target. Both methods will flag potential incidents to volunteers for them to check. Their reports can then be passed immediately to the Environment Agency and Yorkshire Water for professional investigation.

We look forward to the day when Bradford Beck will once again be a focus for local residents and wildlife in our city.

## **Guidance**

- The award is aimed at restoration projects, large or small, and/or community projects those core objectives are to improve the riverine environment and the species which depend upon them through direct action or education.
- This is the initial application. The jury (judging panel) will compile a short list and visit these projects over the summer. The winner will be notified in early November, and an awards ceremony held beginning of 2020.

**Thank you and good luck.**

## **Terms and conditions of entry**

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Prize winners agree to attend the Awards Ceremony and presentation.

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