

Revd Dr Robert P C **BROWN** BA BSc MSc DMS PhD FCIWEM FRMetS C.WEM CEnv

Chartered Environmentalist, Chartered Water and Environmental Manager – **Hydrology.UK**

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Born: 1963 **Address:** Greenholme, Bewcastle, Carlisle, Cumbria, CA6 6PW, UK

Employment:

1995 – present: Independent Consultant – **Hydrology.UK**
1990 – 95 : WS Atkins Water, Principal Hydrologist
1987 – 90 : Institute of Hydrology (now CEH), Flow Regimes and Environmental Management.
1986 – 87 : MSc Engineering Hydrology, Imperial College London
1981 – 84 : BSc (Jt Hons) Geology & Chemistry, Kings College London

Expertise: Water resources assessment; GIS-based catchment hydrology; river flow monitoring, hydrological analysis and naturalisation; flood risk assessments; water resources system modelling and auditing; extensive *Aquator* resource model support including *MS VBA* programming and customisation; abstraction licence support; probabilistic yield assessment of river and reservoir systems; resource system operational modelling and control curve development; drought planning; low flows, flow regime analysis and interaction with aquatic habitats; HEP and micro-hydro power assessment including stream flow measurement; hydrological rainfall-runoff and hydraulic river modelling (including *HYSIM*, *Catchmod* and *MIKE11* models); groundwater/river flow interactions; arid zone flood hydrology and modelling; arid zone rainfall and flood frequency/magnitude analysis. Permaculture Design. Met Office daily climate observer.

Key Past Projects:

- Rainfall-runoff modelling, extension and naturalisation of river flows for the Ely Ouse and Essex rivers: Stour, Chelmer, and Blackwater, 1910-2016. Critical analysis of updated catchment hydrology.
- Critical peer reviews of newly developed regional *Aquator* water resources models for Anglian Water Services Ltd
- Development and ongoing support of the Kielder-system and Tyne-Tees Tunnel water resources model for the Tyne, Derwent, Wear, and Tees valleys of north east England in *Aquator* for Northumbrian Water, 2011-present.
- Hydrological Consultant to Essex & Suffolk Water: including key water resource work relating to the Abberton Reservoir Project; preparation for WRMPs; DO assessment; climate change assessment; development of *Aquator* for operational simulation; resources system modelling using *Aquator* (including VBA customisation); Ely Ouse flow naturalisation; hydrological modelling using *HYSIM*; Drought Contingency Planning; probabilistic and marginal yield analysis; reliability-based operational policy and reservoir control curve development; technical support for *Aquator*; hydrological support since 1993-present.
- Flood exacerbation assessment for Antony Gormley's '7 Times' artwork in Water of Leith, Edinburgh
- Flood Risk Assessments for development planning applications
- Hydrological assessment of Zambian rivers for HEP potential for EleQtra.
- Rainfall frequency/intensity/duration analysis, arid zone rainfall-runoff modelling, and flood frequency/magnitude/volume analysis for Kuwait City storm water drainage master plan and Jeddah storm water drainage design, Saudi Arabia. Development of the Arid Regions Rainfall-Runoff Model (ARRRM) used for flood hydrograph design.
- Daily weather observation for Met Office – UK Climate Station 7078, ongoing.

Countries: UK, France, Kenya, Kuwait, Libya, Norway, Portugal, St Helena, Saudi Arabia, Spain, Turkey, Zambia.

Languages: French (basic).

2019