

Revd Dr Robert P C **BROWN** BA BSc MSc DIC DMS PhD MCIWEM 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; 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 weather 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.
- Hydrological assessment of Zambian rivers for HEP potential for EleQtra.
- Development of water resources and cost assessment model in *Aquator* for the Swindon-Oxfordshire (SwOx) zone for Thames Water.
- Hydro-Electric Power potential assessment for region around Brampton, Cumbria. Voluntary services offered to local sustainable community organisation assessing potential for generation of local renewable forms of energy. Manipulation of GIS data, automatic catchment derivation, stream flow gauging, interaction with Environment Agency.
- 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).

2016

