

Peer Reviewed Publications

Naden, P.S.; Murphy, J.F.; **Old, G.H.**; Newman, J.; Scarlett, P.; Harman, M.; Duerdoth, C.P.; Hawczak, A.; Pretty, J.L.; Arnold, A.; Laize, C.; Hornby, D.D.; Collins, A.L.; Sear, D.A.; Jones, J.I.. 2016 Understanding the controls on deposited fine sediment in the streams of agricultural catchments. *Science of the Total Environment*, 547. 366-381. 10.1016/j.scitotenv.2015.12.079

Murphy, John F.; Jones, J. Iwan; Pretty, James L.; Duerdoth, Chas P.; Hawczak, Adrianna; Arnold, Amanda; Blackburn, John H.; Naden, Pamela S.; **Old, Gareth**; Sear, David A.; Hornby, Duncan; Clarke, Ralph T.; Collins, Adrian L.. 2015 Development of a biotic index using stream macroinvertebrates to assess stress from deposited fine sediment. *Freshwater Biology*, 60 (10). 2019-2036. 10.1111/fwb.12627

House, Andrew R.; Sorensen, James P.R.; Gooddy, Daren C.; Newell, Andrew J.; Marchant, Ben; Mountford, J. Owen; Scarlett, Peter; Williams, Peter J.; **Old, Gareth H.** 2015 [Discrete wetland groundwater discharges revealed with a three-dimensional temperature model and botanical indicators \(Boxford, UK\)](#). *Hydrogeology Journal*, 23 (4). 775-787. 10.1007/s10040-015-1242-5

Old, G.H., Naden, P.S., Rameshwaran, R., Acreman, M.C., Baker, S., Edwards, F., Sorensen, J., Mountford, O., Gooddy, G., Stratford, C.J., Scarlett, P.M., Newman, J.R. and Neal, M. 2014. Instream and riparian implications of weed cutting in a chalk river. *Ecological Engineering*, **71**, 290-300.

Bowes, Michael J.; Jarvie, Helen P.; Naden, Pamela S.; **Old, Gareth H.**; Scarlett, Peter M.; Roberts, Colin; Armstrong, Linda K.; Harman, Sarah A.; Wickham, Heather D.; Collins, Adrian L.. 2014 [Identifying priorities for nutrient mitigation using river concentration-flow relationships: the Thames basin, UK](#). *Journal of Hydrology*, 517. 1-12. 10.1016/j.jhydrol.2014.03.063

Chambers, J.E.; Wilkinson, P.B.; Uhlemann, S.; Sorensen, J.P.R.; Roberts, C.; Newell, A.J.; Ward, W.O.C.; Binley, A.; Williams, P. J.; Gooddy, D.C.; **Old, G.**; Bai, L.. 2014 [Derivation of lowland riparian wetland deposit architecture using geophysical image analysis and interface detection](#). *Water Resources Research*, 50 (7). 5886-5905. 10.1002/2014WR015643

Old, G.H.; Naden, P.S.; Granger, S.J.; Bilotta, G.S.; Brazier, R.E.; Macleod, C.J.A.; Krueger, T.; Bol, R.; Hawkins, J.M.B.; Haygarth, P.; Freer, J.. 2012 [A novel application of natural fluorescence to understand the sources and transport pathways of pollutants from livestock farming in small headwater catchments](#). *Science of the Total Environment*, **417-418**. 169-182. 10.1016/j.scitotenv.2011.12.013

Granger, S.J., Bol, R., Hawkins, J.M.B., White, S.M., Naden, P.S., **Old, G.H.**, Marsh, J.K., Bilotta, G.S., Brazier, R.E., Macleod, C.J.A. and Haygarth, P.M. (2011) Using artificial fluorescent particles as tracers of livestock wastes within an agricultural catchment. *Science of the Total Environment*, **409**, 1095-1103.

Naden, P. S., **Old, G. H.**, Eliot-Laize, C., Granger, S.J., Hawkins, J.M.B., Bol, R. and Haygarth, P. (2010) Assessment of natural fluorescence as a tracer of diffuse agricultural pollution from slurry spreading on intensely-farmed grasslands. *Water Research*, **44**, 1701-1712.

Granger, S.J., Bol, R., Dixon, L., Naden, P.S., **Old, G.H.**, Marsh, J.K., Bilotta, G., Brazier, R., White, S.M. and Haygarth, P.M. (2010) Assessing multiple novel tracers to improve the understanding of the contribution of agricultural farm waste to diffuse water pollution. *Journal of Environmental Monitoring*, **12**, 1159 -1169.

Austnes, K., Evans, C.D., Eliot-Laize, C., Naden, P.S. and **Old, G.H.** (2010) Effects of storm events on mobilisation and in-stream processing of dissolved organic matter (DOM) in a Welsh peatland catchment. *Biogeochemistry*. 10.1007/s10533-009-9399-4.

Granger, S.J., Hawkins, J.M.B., Bol, R., White, S.M., Naden, P., **Old, G.**, Bilotta, G.S., Brazier, R.E., Macleod, C.J.A. and Haygarth, P.M. (2010) High temporal resolution monitoring of multiple pollutant responses in drainage from an intensively managed grassland catchment caused by a summer storm. *Water Air and Soil Pollution*, **205**, 377-393.

Lapworth, D.J.; Gooddy, D.C.; Allen, D.; **Old, G.H.**. 2009 [Understanding groundwater, surface water and hyporheic zone biogeochemical processes in a Chalk catchment using fluorescence properties of dissolved and colloidal organic matter](#). *Journal of Geophysical Research*, 114, G00F02. 10, pp. 10.1029/2009JG000921

Acreman, M.; Aldrick, J.; Binnie, C.; Black, A.; Cowx, I.; Dawson, H.; Dunbar, M.; Extence, C.; Hannaford, J.; Harby, A.; Holmes, N.; Jarrett, N.; **Old, G.**; Peirson, G.; Webb, J.; Wood, P.. 2009 [Environmental flow from dams; the Water Framework Directive](#). *Engineering Sustainability*, 162 (1). 13-22. 10.1680/ensu.2009.162.1.13

Buss, Steve; Cai, Zuansi; Cardenas, Bayarni; Fleckenstein, Jan; Hannah, David; Heppell, Kate; Hulme, Paul; Ibrahim, Tristan; Kaeser, Daniel; Krause, Stefan; Lawler, Damian; Lerner, David; Mant, Jenny; Malcolm, Iain; **Old, Gareth**; Parkin, Geoff; Pickup, Roger; Pinay, Gilles; Porter, Jonathan; **Rhodes, Glenn**; Ritchie, Anna; Riley, Janet; Robertson, Anne; Sear, David; Shields, Brian; Smith, Jonathan; Tellam, John; Wood, Paul. 2009 [The Hyporheic Handbook: A Handbook on the groundwater-surfacewater interface and hyporheic zone for environmental managers](#). Bristol,UK, Environment Agency, 280pp. (Science Report, SC0500).

Haygarth, P. M.; Bilotta, G. S.; Bol, R.; Brazier, R. E.; Butler, P. J.; Freer, J.; Gimbert, L. J.; Granger, S. J.; Krueger, T.; Macleod, C. J. A.; Naden, P.; **Old, G.**; Quinton, J. N.; Smith, B.; Worsfold, P.. 2006 [Processes affecting transfer of sediment and colloids, with associated phosphorus, from intensively farmed grasslands: an overview of key issues](#). *Hydrological Processes*, 20. 4407-4413. doi:1002/hyp.6598

Neal, Colin; Neal, Margaret; Leeks, Graham J. L.; Old, Gareth; Hill, Linda; **Wickham, Heather**. 2006 [Suspended sediment and particulate phosphorus in surface waters of the upper Thames Basin, UK](#). *Journal of Hydrology*, 330. 142-154. 10.1016/j.jhydrol.2006.04.016

Old, Gareth h.; Leeks, Graham J. L.; Packman, John C.; Smith, Barnaby P.G.; Lewis, Scott; **Hewitt, Edward J.**. 2006 [River flow and associated transport of sediments and solutes through a highly urbanised catchment:](#)

Bradford, West Yorkshire. *Science of the Total Environment*, 360. 98-108.
[10.1016/j.scitotenv.2005.08.028](https://doi.org/10.1016/j.scitotenv.2005.08.028)

Walling, D. E.; Collins, A. L.; Jones, P. A.; **Leeks, G. J. L.**; **Old, G.**. 2006
Establishing fine-grained sediment budgets for the Pang and Lambourn LOCAR
catchments, UK. *Journal of Hydrology*, 330. 126-141.
[10.1016/j.jhydrol.2006.04.015](https://doi.org/10.1016/j.jhydrol.2006.04.015)