



## Birmingham

### 24 March 2010



## Groundwater Sampling

### including Low Flow and Passive (no-purge) Groundwater Sampling

The requirements of the Water Framework Directive have given a new emphasis to the need for groundwater quality monitoring, and for obtaining reliable and reproducible data. This workshop will help to broaden your understanding and gain a hands on appreciation of the range of equipment now available for different sampling methods, including 3 well volume purging, low flow (or "micro-purge") and passive sampling.

#### Workshop Programme

- **Purge or no-purge?**  
*An overview of groundwater sampling methodologies*
- Conventional Sampling Equipment
  - Dip meters and interface meters
  - Water quality equipment / flow cells
  - Bailers
  - Inertial pumps
- Low Flow Sampling Equipment
  - Peristaltic pumps
  - Submersible pumps
  - Double Valve pumps
  - Bladder pumps
- Passive Sampling Methods  
(an alternative to Low Flow sampling)
  - Passive diffusion bag (Equilibrator)
  - Hydrasleeve

#### Who Should Attend?

Hydrogeologists, Field Technicians, Consultants, Technical Managers. In fact, anyone responsible for planning, specifying or collecting groundwater quality samples from boreholes.

Presentations are led by Peter Dumble, Hydrogeologist and MD of Waterra UK, who is one of the principal technical authors of the Environment Agency and SEPA guidance for monitoring leachate, groundwater and surface waters at landfill sites. Sessions are highly practical, and designed to help you get the most out of your field programmes and equipment.

Some comments from delegates on previous courses....

*'Great to have hands-on session with the equipment' / "Spot on, very informative and pitched at right level. Team fielded all questions very well" / "Good group size allowed tailoring to needs"*

*"The theory of water movement in boreholes was very useful. The level of experience and knowledge of the presenters was excellent compared to other courses provided by consultants!"*

### **Workshop Fee: £200 (+ VAT) per person**

Prices include refreshments, 2 course restaurant lunch, delegate pack and CPD certificate  
Max of 15 delegates per course. Booking Form on reverse.

Waterra UK Limited, Unit 4, 179 Stratford Road, Shirley, Solihull, B90 3AU.  
Telephone: 0121 733 7743 or 7745 email: sales@waterrauk.com / www.waterrauk.com

# Booking Form

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Becketts Farm Conference Centre, Birmingham B47 6AJ.



Joining instructions will be emailed separately  
 Prices include course folder, USB drive, refreshments, CPD and lunch

Please photocopy or print additional copies.  
 Prices include course folder, digital content on USB disk, refreshments, lunch and CPD

**Company Name**.....

Address: .....

.....

Postcode..... Tel..... Fax.....

**Please reserve places for:**

1.....email.....

2.....email.....

3.....email.....

**Workshops** .....places @ £200 + VAT = £..... (€220 for Irish delegates)

**Discounts:** 10% for 2 or more delegate places or any Geological Society Fellows  
 10% for payments received no later than 2 weeks prior to course date.  
 35% for students or employees of educational institutions (no additional discounts claimable).

*Booking fee is non-refundable but may be transferred to another delegate from your company.*

To pay by credit card: ..... OR

Card type..... Please invoice my company

Card number..... Purchase order number.....

Card holder.....Expiry date.....

Contact Tel. (for Card security code) .....

**Email or Fax back to 0121 733 7746**

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