



## UK User Workshops and Training Days 2016

To support our 2016 release, the TUFLOW team will be running a number of user workshops to showcase the latest new features and offering 'hands on' introductory training sessions.

TUFLOW is a world-leading, powerful computational engine for simulating the risk of flooding from rivers and sea, surface water and urban drainage. The fully integrated 1D and 2D hydrodynamic simulation includes all flow paths, both above and below ground, in a single model. It has been successfully applied world-wide to a diverse range of flood management applications, from coastal storm tide inundation to integrated catchment scale models and detailed urban drainage pipe networks.

BMT WBM are the developers of the TUFLOW Suite of software. As developers and users, we offer unparalleled insight into the best practice application of TUFLOW. To ensure a personal service and facilitate participation, training sessions can accommodate up to 8 individuals with a minimum of two members of the support team on hand.

### [Meet the Trainers](#)

BMT WBM has expanded our TUFLOW support team to service our growing UK user community. Our knowledgeable and specialist team not only develop the software, but also use it on a daily basis. This means that they can provide practical-based training, offering valuable knowledge based on their extensive consulting experience.



TUFLOW UK Support Team. From left to right: Rohan King, Rachel Jensen, Mat Roberts, Alex Curran and Steph Dufour.

***"Thank you for the comprehensive yet straight forward and clear manner in which you both delivered your individual components of the session. I found it concise, to the point, pertinent to my needs without being overly complex or top loaded with needing a prior detailed knowledge of modelling terminology or theory."***

*- Adam Littler, Haringey Council*

### [Who Should Attend](#)

The workshops and training sessions are designed for engineers, scientists and others involved in water and environmental management. Whether you are new to TUFLOW or a long term users, our training provides a cost-effective way to develop or enhance your capabilities so that you get the most out of your software. It is also an excellent opportunity to network and discuss TUFLOW relate applications with other modellers and environmental specialists working in the flood risk management industry.

The TUFLOW UK support team has already delivered workshops to the UK Environment Agency, so the user workshops are especially useful for all WEM Framework consultants. Places are limited so book early to avoid missing out!

### [Introduction to TUFLOW Training](#)

This one day training course is ideal for users who are new to TUFLOW. It provides an introduction to the theory and practice of 1D and 2D modelling techniques, including building, running and reviewing models. No prior knowledge of flood modelling is necessary, although it is helpful to have a basic understanding of Geographical Information Systems (GIS). At the end of this course the attendees will have the practical skills that enable them to create a simple TUFLOW hydraulic model, be able to view and interrogate results and assess overall model health.

### [TUFLOW User Workshop – 2016 release](#)

This one day workshop is for proficient users of TUFLOW who want to develop their knowledge further. The workshop will introduce a number of advanced modelling techniques and focus on latest features within the new 2016 release. Key developments include improved structure routines, rainfall control files, automated parameterisation – particularly useful for Monte Carlo simulations – and advanced output formats, including Delft-FEWS in NetCDF. Part of the day will also be dedicated to the GPU module, which has revolutionised the speed of running TUFLOW simulations.

### [TUFLOW FV User Workshop](#)

One of our TUFLOW Finite Volume (FV) experts from Australia, Dr Matt Barnes, will be visiting especially to host this workshop. TUFLOW FV is our flexible mesh software for simulating hydrodynamic, sediment transport and water quality processes in oceans, estuaries, rivers and floodplains. The flexible mesh configuration allows for seamless boundary fitting along complex coastlines or open channels as well as accurately and efficiently representing complex bathymetries with a minimum number of computational elements. Both inexperienced and experienced hydrodynamic modellers will benefit from attending this workshop. The workshop will introduce users to TUFLOW FV modelling and also provide a demonstration of advanced applications.

### [Dates and Location](#)

Training will be delivered from our London office at St Katharine's Docks on the following dates:

Introduction to TUFLOW	7th June	£295 pp (excl. VAT)
TUFLOW User Workshop	8th June/ 5th July	£295 pp (excl. VAT)
TUFLOW FV User Workshop	28th June	£295 pp (excl. VAT)

We recommend attendees bring their own laptop as part of the training is to guide users through the setup and installation process and explain how to optimise your hardware configuration. Training laptops may be provided upon request.



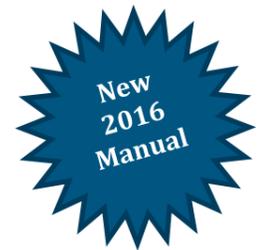
BMT WBM Ltd, St Katharine's Docks Office, Central London.

### [Booking and Enquiries](#)

Bookings for courses can be made by contacting BMT WBM via one of the following methods;

Phone: +44 (0)20 8090 1566

Or via email: [training@tuflow.com](mailto:training@tuflow.com)



## Introduction to TUFLOW Training

The training is delivered through a series of presentations, hands-on practicals and open discussion sessions.

**8:45**

### TUFLOW Overview:

A technical overview of TUFLOW and the interactions between TUFLOW, GIS, and text control files.

**9:45**

### TUFLOW Theory

Including template files, model geometry, boundary conditions and running TUFLOW simulations.

**10:15**

Tea break, software installation.

**10:45**

### 2D Model Development

How to create and run 2D only floodplain model and review results.

**12:30**

## TUFLOW User Workshop

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**8:45**

### 2016 TUFLOW Release Overview

- Free demo version of TUFLOW.
- NEW 2016 Manual and Wiki pages.
- Point Rainfall to Gridded Rainfall feature.
- Log law bed resistance.

**10:30**

Morning Tea and Networking.

**10:45**

### Direct Rainfall Modelling

- New Features and Modelling Techniques
- How to best use the new rainfall input types (NETCDF, ASCII, FLT) and interpolation options (Poly, IDW, TIN).
- Discussion on the impact of different bed resistance models for direct rainfall models. What is appropriate for a given model application?

**12:15**

Lunch (provided).

## TUFLOW FV User Workshop

The user workshop will be delivered through a series of presentations and interactive open discussion sessions.

**8:45**

### TUFLOW Introduction

Technical overview of TUFLOW FV and a discussion on the benefits of the flexible mesh approach. An overview of the model development environment will also be presented.

**10:30**

Morning Tea and Networking.

**10:45**

### Model Option Overview

The range of available model input and output options will be presented. This includes:

- 2D and 3D geometry specifications.
- 1D and 2D structure options and controls.
- Variable topography/bathymetry features.
- Linkages with external gridded boundary condition data.
- Model output options.

**12:30**

Lunch (provided).

Lunch (provided).

**13:15**

### 2D Topography Modification

How to use break lines, modify topography using cut/fill regions and use model check files.

**13:45**

### Embedding 1D structures

1D/2D linking mechanisms, how to embed 1D structures in a 2D model and reviewing structure performance.

**14:30**

### Model Performance

Model check files and monitoring the model health/ performance.

**15:30**

Afternoon tea and networking.

**16:00 – 17:00**

Training day recap and Q&A session

**13:15**

### Advanced Structures

- New and improved 1D bridges
- Operational Structures
- New Structure Groups for combined 1D/2D output at structures
- Structure representation guidance.

### TUFLOW's GPU Module

- How to setup a GPU model
- How to optimise your computer hardware to get the best out of GPU.
- Virtual Pipes feature

### Visualisation and Output Options

- Using Output Zones
- Demonstration of new Output Formats (WaterRIDE, FEWS, 12D).
- Demonstration of Python, TuPlot, Crayfish and miTools

**15:30**

Afternoon tea and networking.

**16:00 – 17:00**

Training day recap and Q&A session

**13:15**

### Project Demonstrations

The afternoon session will showcase a series of real world applications.

- Coastal applications:
  - Port development hydrodynamic impact assessment.
  - Dredge plume and ambient turbidity modelling.
  - Coupled wave/tide hydrodynamic and sediment transport assessment.
- Estuarine applications:
  - 3D salinity modelling.
  - Advection dispersion modelling.
- Water quality applications
  - Linkages with the Aquatic EcoDynamics (AED) model.

**15:30**

Afternoon tea and networking.

**16:00 – 17:00**

### Project Demonstration continued and Q&A

- Floodplain application.

The workshop will conclude with a recap and Q&A session.