



GROUNDWATER ASSET MANAGEMENT

Burlington House

Wednesday 10th
September 2008



WELCOME

THANKYOUs

On behalf of myself, Sarah Beeson, Gerd Cachandt (who unfortunately can't be here today) and the Hydro Group, thank you all for coming today.

We hope that you find the diverse range of talks we've got lined up interesting

A big thank you from myself and the other organisers to all of the speakers without whom we wouldn't be here today

THE PHOTO – an example of asset management?

Introduction

- Why groundwater asset management?
 - Some concepts and definitions
- What are the themes for today's meeting?

I thought it would be useful to cover a few **DEFINITIONS** and **CONCEPTS** before we kick off with the presentations and an **OVERVIEW** of the themes that will be presented during the sessions

WHY are we here today?

WHAT is the relevance of good asset management and **STEWARDSHIP** to us as the groundwater community?

Groundwater Asset Management should be considered as a **MULTI FUNCTIONAL** discipline relating to the groundwater systems we work with on a daily basis. The assets can be thought of not only as the **AQUIFERS** and their **PHYSICAL ENVIRONMENTS**, the **CHEMICAL ENVIRONMENTS**, the means of **EXTRACTION** of the resource and the associated **ASSETS (BOREHOLES, PUMPING SYSTEMS)**

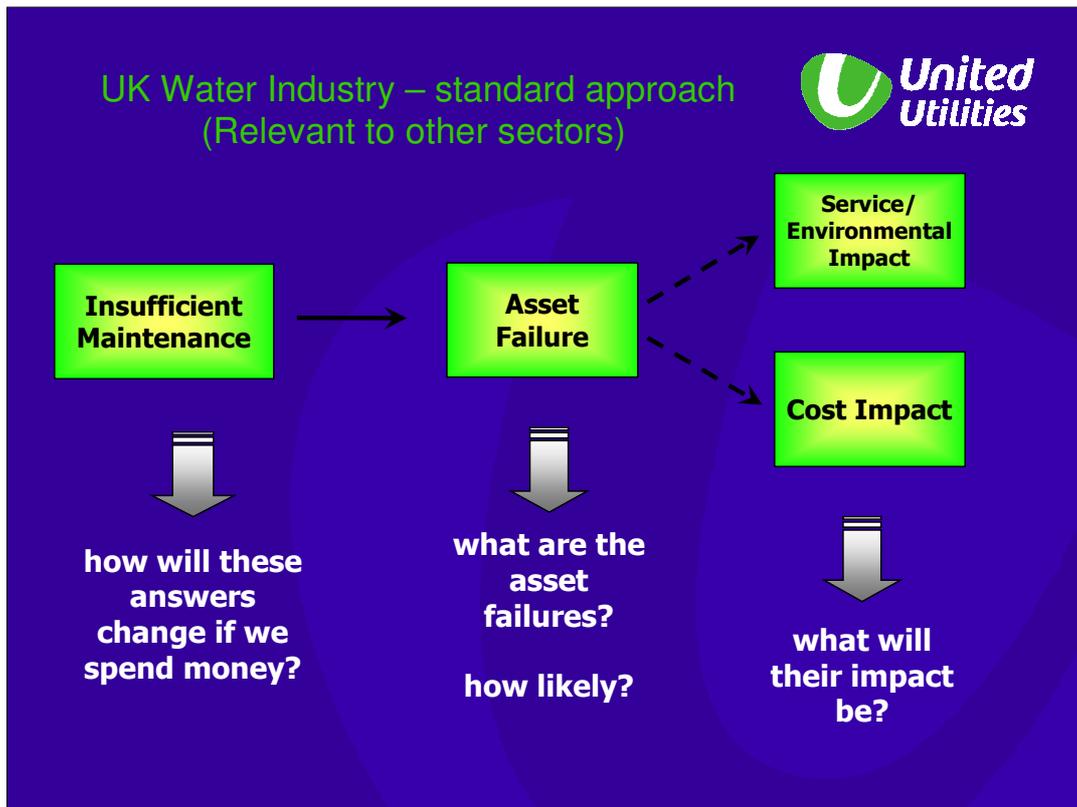
More and more us as **HYDROGEOLOGISTS** have to have knowledge of **ECONOMIC PROCESSES**, the **CONSEQUENCE** and **IMPACTS** of **RISK** for our businesses whether we be the asset **OWNER, STEWARD** (enhancement, maintenance, renewal, delivering performance) or the **OPERATOR**

MANAGEMENT of assets not only plays a key role in determining the **OPERATIONAL PERFORMANCE** and **PROFITABILITY** of industries that use GW assets as part of their core business but also in balancing this against the needs of the **ENVIRONMENT** in the current **REGULATORY FRAMEWORK** that we operate in.

GW asset management is the art and science of **MAKING THE RIGHT DECISIONS** and **OPTIMISING PROCESSES** and minimising **IMPACTS**. A common business objective is to minimise the **WHOLE LIFE COST** of assets but there may be other critical factors such as **RISK** or **BUSINESS CONTINUITY** to be considered objectively in this decision making.

A sound understanding of **RISK** is required at all stages of the **LIFECYCLE**,

Also the **DEVELOPMENT** and **IMPLEMENTATION** of processes for the conceptualisation, design, installation, commissioning, operation, maintenance and disposal of assets at lowest **WHOLE LIFE COST**.



MANAGEMENT OF ASSETS IS IMPORTANT AND HAS RELEVANCE TO MANY AREAS OF OUR BUSINESSES

More and more, the impacts on our **ENVIRONMENT** have to be considered As we gain a better understanding of its **NEEDS** as we increase our **KNOWLEDGE** and **UNDERSTANDING**

As the groundwater community, we are being challenged to **MINIMISE COSTS** wherever possible (CAPEX and OPEX), deliver **ROBUST SOLUTIONS** to problems to our clients

OPTIMISING our groundwater systems is critical

Business **RISKS**, increased **POWER** and **ENERGY** costs, the **CARBON AGENDA, CLIMATE CHANGE**

Meeting Summary - Themes

- T1: Groundwater Asset Management
 - Water scarcity, drought, optimisation, water quality, carbon accounting, treatment costs, WLC analysis
- T2: Operational Experience
 - Asset life, expenditure, energy efficiency, planned vs. predictive maintenance, capital investment
- T3: Asset Design
 - Source operation, conceptual models/hydrogeology, water treatment systems
- T4: Well Rehabilitation
 - Groundwater environments, causes, effects, solutions

We've grouped today's presentations into **FOUR** categories

T1: OPTIMISING AND UNDERSTANDING THE RESOURCE

**T2: PREDICTING LIVES/COSTS, INVESTMENT
PRIORITISATION AND NEED**

T3: PHYSICAL PROCESSES, PROBLEMS, SOLUTIONS

T4: IMPROVING THE PERFORMANCE OF BOREHOLES



BEFORE WE START

**QUESTIONS AND ANSWERS AFTER EACH
PRESENTATION**

**FURTHER TIME AT THE END OF THE DAY FOR
DISCUSSION**

**PLEASE CAN WE ASK THE SPEAKERS TO KEEP
TO THEIR SLOTS**

WE WILL PROMPT YOU IF YOU OVER-RUN

**PLEASE CAN YOU MAKE YOUR WAY BACK TO
THE THEATRE PROMPTLY AT THE START OF
EACH SESSION**

**I'D LIKE TO INTRODUCE JULIEN HAROU FROM
UCL WHO WILL BE DISCUSSING APPROACHES TO
GW RESOURCE ASSESSMENT IN THE STATES**