

TECHNICAL COMMITTEE – WATER REUSE

Date: Thursday 28th August 2014

Venue: Chandlers, Chandlers House, Daveys Lane, Lewes, East Sussex

Time: 10.30 am – 2.30 pm

In attendance:

Phil Barnard	Chandlers (Chair)
Kevin Reed	Graf UK (Vice Chair)
Andy Wilson	Scottish Water
Suzy Armsden	WATEF Administrator
Alison Maydom	DEFRA
Donna McInnes	DEFRA
Angela Wallis	Environment Agency
Neil Pendle	Waterscan
Cyprian Njue	University of Brighton
Phil Henry	Polypipe
Hamilton Scanlon	Reaqua Systems

Apologies:

CC Water

Daniel Goodwin	Cranfield University
Daniel Clark	CC Water
Lutz Johnen	Aquality
Mike Lee	Energy Team
Sarah Mukherjee	Water UK
Matthew Foster	Severn Trent

MINUTES

Welcome & Introductions

Phil Barnard welcomed everyone to the meeting - and asked everyone to make a brief introduction to the other members. Cyprian Njue introduced himself as an observer at the meeting – his responsibility will be a desk study of the Water Re-Use codes and practices.

Water Re-Use & Case Studies

Definition of Water Reuse: General discussion on definition of water re-use ensued. Kevin Reed circulated a document with proposed definitions:

- Grey water: water which is treated and recycled from baths, sinks and basins and then used for WC flushing, washing machines, car washing and irrigation
- Rain water: collected from roofs that is filtered, possibly treated and then used for WC flushing, washing machines, car washing and irrigation

- Water from waste water treatment plants to be used for irrigation

Case Studies: Greywater system in Dubai – used for cooling of swimming pools. Thames Water project at Olympic Park. Other projects taking place (e.g. UKWIR project on waste water reuse) – however public perception of indirect potable reuse is not good. Committee to focus on small scale water reuse projects – work under way on updating standards of final effluent reuse.

Existing/Future Codes & Practices – Rainwater Harvesting/Greywater Recycling

Report on water reuse systems in various office – some retrofit and some new build was discussed. Also a recent survey of London homes found quite a few issues – both quality and economical. EA now deciding what to do. There are buildings where water recycling was installed as part of a new build (i.e. EA offices at Horizon House, Bristol) which has rainwater harvesting system. However data is difficult to source.

Severn Trent has done a more recent study which gives more positive results (Matt Foster to provide). Installation of systems for customers of Scottish Water was done by licenced contractors. However, Scottish Water has responsibility for quality of water to customers.

There are some difficulties in checking rainwater harvesting systems prior to installation. Who is responsible – WRAS? Manufacturers should design systems which work – one of the issues found by EA is cross contamination of drinking water. There are other issues to take into account such as maintenance and contamination from outside sources.

Opportunities for water efficiency are something which water companies should think about. Discussion ensued on water companies' model on water efficiency:

- Water companies and their approved installers are trying to give their customers a way of saving money as well as trying to retain customer business
- The water company model is to sell water – if water was sold at a slightly higher rate – this would give additional capital for water efficiency?

New builds incorporate water efficient technologies. There is a need to incorporate grey water and rainwater systems into new builds and also relevant pipework. Retrofit is a more challenging area as people try to connect to existing pipework. Domestic customers want to purchase water efficient products when they see savings involved. British standards exist on commercial side of rainwater harvesting as the commercial market is more established.

Barriers

The need for codes and standards was discussed. Regulations need enforcement. There are BS codes for domestic greywater system – but these codes are often not followed. The WrC report highlights some points such as how can we map where systems are installed and who is responsible. Perhaps manufacturers should state that guarantee is invalid until an approved installer is used? Water companies suffer from lack of resources and how could they recover costs of sending someone to site, technology etc.? Should water companies inspect the system? If a registered plumber inspects and it is a Water Safe build they register for water saving installation – perhaps CIPHE would be able to help?

Over 50% of domestic rainwater harvesting systems are installed for housing associations. 90% of problems occur through plumbers not knowing which way round to install the water meter. There is a need for quality standards and maintenance standards and to engage people in order to make them see the value in standards.

Cyprian Njue is now working on the desk study for codes and practices for water reuse. He will look at all existing regulation such as building standards and various other BSI codes. The purpose is to map out existing regulations to try and identify a clear pathway forward so that we know what is required. Information will be available by the time of the conference.

Regulations

There is a need to know what regulations are in place prior to installation. Is it the manufacturers' responsibility to produce guides?

There is also the need for customer choice – where should they go if they want to buy rainwater harvesting systems and what are benefits? Who makes choices about systems - is it the customer or the builder? What about possible problems for retrofit systems – pipework replacement, cross contamination, public health issues?

(Note: Phil Henry joined meeting at this point having been delayed by an incident on the M25)

Carbon Implications

Angela Wallis mentioned 2010 EA presentation on the carbon impact of water reuse systems and the need for updated information and more credible evidence.

Action: Alison to forward draft specification on review and update of 2010 report to Suzy Armsden for circulation amongst committee members only.

Funds needed to update report. Alison Maydom: there may be funds available £5,000 to help.

EA and water companies have a collaborative fund where they have a pot to do research. Objectives would be enhancing evidence base, looking at gathering information from water companies, greywater recycling and rainwater harvesting companies. Information gathered will be in public domain. Cyprian will prepare something prior to conference and Sarah Mukherjee may like to add to discussion

Installation considerations

The main difficulty with installation is in regulating and enforcing. Manufacturer's standards are good. BSI standards (BS8515:2009 RWH and BS8525-1:2010GWR) need updating - more training and updating required to avoid problems with cross contamination etc. There is a need to fill the knowledge gap- we need to look at public engagement and knowledge transfer. Matt Foster at Severn Trent has done work on this. We need to look at public perception of water companies and the trust issue. Should water companies engage the public or is there a better way?

Discussion on demand management followed; Scottish Water is against domestic metering – they are big on demand management and doing a couple of small trials to improve knowledge. Thames

Water has already spent a lot of money to find that the main difficulty is public engagement – particularly the perception of water quality when related to water reuse. There are also cultural issues to take into account. Any engagement programme has to be large scale.

Lord Mayor's office has water reuse system has this been publicised? EA are working closely with Thames Water to understand the outcomes of their demand management programme.

Public Engagement

There is a need to write some sort of specification about customer engagement relating to water reuse. Example questions:

- What do you feel about water reuse in your house?
- Would you flush the toilet with grey water?

There is need to grow perception of water efficiency within water reuse; need to define target audience – person with new house or person with old house. If high risk or perceived high risk area – the water company should offer an assessment process – this could lead onto something more. Severn Trent asked their customers how much they would pay for water reuse equipment and the standard answer was £150. The strategy of rainwater harvesting has changed – the biggest issue is SUDS. We should see regulations from more of a guideline point of view. SUDS is being combined with rainwater harvesting. This is a market-led initiative and the debate should continue.

Presentations for conference:

- Phil Barnard – we need 5 presentations – teams as follows:
- Environment Agency - Water Reuse – Alison Maydom and Angela Wallis
- Water Reuse Codes and Practices – Desk study: Donna McInnes
- How do we regulate the Water Reuse Industry? Kevin Reed/Phil Barnard/Hamilton Scanlon
- How is technology developing within Water Reuse Industry? Neil Pendle/Kevin Reed/Hamilton Scanlon/Phil Henry
- Water Reuse Public Awareness and Engagement (Phil Barnard/Matt Foster?)

Action: Phil Barnard: to talk to Matt Foster about public engagement presentation

Perhaps think about using voting buttons software to engage delegates

Action: Suzy to obtain and set-up kit

Next meetings

Pre-conference meeting scheduled for 9th September at 5.30 pm at University of Brighton, Huxley Building, Main Lecture theatre.

Action: all conference presentations to be finalised by 8th September ready for discussion at meeting.

Post conference meeting scheduled for 10th October at 9.30 am at Graf UK offices in Banbury –

Action: Suzy Armsden to send planners.

ACTIONS FOR NEXT MEETING

Matt Foster to provide team with recent study on installation of RWH and GWR systems

Team: look at specifications/guidelines for promoting water reuse to domestic customers and non domestic customers

Team: look at writing draft specification for public engagement on water reuse – ideas/proposals for next meeting

Team: any discussion points arising from Water Reuse conference session - send to Suzy Armsden for inclusion in agenda by 6th October 2014