WATER UK
Standards Programme

Topic F. Water – supply inside buildings

1. Details of objectives.

Long Term Objectives for Topic – see Project Plan below for details	Responsible Water UK Policy Advisory Group and contact
F.1: To ensure that customers can procure products that provide consumer safety (for the product lifetime) and are cost-effective.	Drinking Water – Jim Marshall Customers – Rob Wesley
F.2: To ensure that systems and components connected to the public water supply provide adequate performance to prevent contamination and waste of water.	Drinking Water – Jim Marshall Customers – Rob Wesley
F.3: To identify best practice in areas where current practice is divergent.	Drinking Water – Jim Marshall Customers – Rob Wesley

Topic	Water – Supply Inside Buildings	Sub-topics	Design of systems (hot & cold water), freezing, water quality/contamination, non-wholesome water/recycling, backflow protection. Water conservation, storage of water, product testing and performance, product selection. Water softeners. Fire systems, irrigation, cooling systems, catering equipment, plumbing installation methods

The topic can be divided into the following key stages:

Materials & substances in contact with water	Water quality, materials in contact with potable water, contamination.
Water fittings and appliances	Product testing and performance, product selection, water softeners, catering equipment, pipes, valves, joints
Cold water system design, installation and services	Design of systems, pipeline identification, freezing, installation, storage of water, fire systems, irrigation, permeability (plastics/rubber), disinfection, metering and impact on demand
Non-wholesome water and recycling	Recycling, water conservation, pipe marking
Backflow prevention	Backflow protection, fluid categories, protection devices

Hot water system design, installation and services	Design of systems, distribution temperatures, storage of water, discharges, safety

Of key concern to the UK Water Industry is

- Contamination of water supply by materials, non-wholesome water sources or permeability/migration;
- Waste of water by poor installation or product performance, including fire sprinkler systems, water softeners;
- backflow prevention.

Current UK practice

- The Water Supply (Water Fittings) Regulations apply to any water fitting installed in premises to which water undertaker is supplying water.
- The Water Regulations allow the acceptance by the Water Regulations Advisory Scheme (WRAS) of materials in contact with water.
- Water Supply (Water Fittings) Regulations prepared by Defra - Water Companies partake through WRAS and Water UK in review of Regulations.
- Guidance to Regulations prepared by Defra and interpretation by Water Industry – all encompassed in Water Regulations Guide
- Government test specifications prescribed for water fittings compliance with Regulations/Guidance drawing on British or European Standards which may be out of date
- Water reuse (rainwater or grey water): dual infrastructure being promoted for water efficiency in domestic premises

Current issues and pressures

- The role of WRAS and the requirements for non-metallic materials in contact with water may be changed by the implementation of alternative approval systems to the original EAS (a single, mandatory European approval scheme) and Notified Certification Bodies, which are unlikely to proceed. Currently, the possibility of an EAS based on mutual recognition is being considered by some Member State regulators. The scale and nature of these changes are not yet clear but developments need to be monitored.
- Revisions of Building Regulations and Water Regulations to enhance water efficiency (water conservation, non-wholesome water, hot & cold water system design), leading to development of targets or standards for water consumption of fittings (e.g. taps, showers etc).
- Market Transformation Programme developing test methods for water fittings and appliances – lack of detailed knowledge could mean lesser standards
- BS EN 806 series of standards when published, will supersede some of BS 6700
- BS 6700 (design, installation, testing and maintenance of services supplying water for domestic use within buildings and their cartilages) has been revised and published. Will be superseded in time by EN 806 series of standards.
- EN 200 (Sanitary taps) under revision – includes requirements for air gaps
- Water efficiency standards and performance levels being discussed in many groups.
- Domestic sprinkler systems – Government plans for development of low cost system may affect water quality and challenge Water Fittings Regulations
- Garden irrigation systems.

- EN 1111 and EN 1287 (Thermostatic mixing valves) under revision – aim to include the D 08 NHS requirement – of less relevance to water industry within a technical document
- CE marking, product certification and environmental product declarations – see Regulation topic, aim to develop a general standard detailing the common tests within the terminal fittings sector, this general standard will/may be used to specify those tests required for CE approval.
- There will still be a need for standards for materials and water quality even if EAS does not happen – see Water Quality topic.
- WRAS vs Regulation 31 approvals.
- Standards for materials to be connected to rainwater/greywater systems – security and health.
- Training of installers of rainwater and greywater systems.
- Cross contamination between rainwater/greywater and drinking water systems.
- Review of BS1710.

Long-term objectives

Objective F.1: To ensure that customers can procure products that provide consumer safety (for the product lifetime), comply with legal requirements and are cost-effective

Note: This is also an objective of 'Water – Quality' topic. Duplication of effort would not be required.

Protect the current standards for testing of materials by ensuring:

- UK requirements are maintained in European Standards/ Approval Scheme to ensure unsatisfactory products do not have to be accepted;
- Implementation of a satisfactory alternative approval system to the EAS in the UK;
- Policing of development of product testing standards (UK and Europe) to reflect current approval systems (EAS alternative or National Standards).

Objective F.2: To ensure that systems and components connected to the public water supply provide adequate performance to prevent contamination and waste of water

Protect the current standards for testing and approval of products by ensuring:

- A common set of functional requirements in European Standards – BS EN 806;
- Policing of development of individual product standards to reflect functional requirements;
- Adequate flexibility (e.g. through the use of different grades or types) to meet the UK water industry's needs;
- UK guidance documents reflect best/modern practice and apply across water industry where appropriate/possible – maintenance of Water Regulations Guide, Information & Guidance Notes, liaison with MTP;
- Suitable briefing of Water Regulations Inspectors on guidance (Water Suppliers may expect this of WRAS rather than Water UK Standards Board).
- Contributing to standards concerned with rainwater/greywater re-use.
- Contributing to British Standards on the identification of pipelines.

Use best practice in design and installation of systems by ensuring:

- Clarification of boundaries between water regulations and building regulations (Water Suppliers may expect this of WRAS rather than Water UK Standards Board).

Objective F.3: To identify best practice in areas where current practice is divergent

Benchmark UK and European company practice to identify a best approach for the future for:

- Fluid categories; and
- Backflow prevention devices.

2. Project plan to deliver each long-term objective:

Objective/ Project	Potential collaborators	Topic Advisor, PAG and Contact	Project Activity	Specific activity in 2011/12 including Water UK Networks
Objective F.1: To ensure that customers can procure products that provide consumer safety (for the product lifetime) and are cost-effective				
F.1.1 Inclusion of water industry requirements in UK standards (to ensure unsatisfact'y products do not have to be accepted)		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	*Covered by 'Water – Quality' Topic I.1.1*	
F.1.2 Inclusion of water industry requirements in CEN standards (to ensure unsatisfact'y products do not have to be accepted)		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	*Covered by 'Water – Quality' Topic I.1.2*	
F.1.3 Inclusion of water industry requirements in alternative to the -EAS		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall	*Covered by 'Water – Quality' Topic I.1.3*	
F.1.4 Satisfactory implementation of the alternative to the EAS in the UK		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	*Covered by 'Water – Quality' Topic I.1.5*	
F.1.5 An adequate UK		Steve Tuckwell Ian Whittaker		No current activity

Objective/ Project	Potential collaborators	Topic Advisor, PAG and Contact	Project Activity	Specific activity in 2011/12 including Water UK Networks
system of approval reflecting the alternative to the EAS is developed		Drinking Water Customers Jim Marshall		
Objective F.2: To ensure that systems and components connected to the public water supply provide adequate performance to prevent contamination and waste of water				
F.2.1 A common set of functional requirements in European Standards – BS EN 806		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	Attend CEN TC 164 (Water supply) Bob Chambers + B/504 Continue active participation. Haydn White, Geoff Miller	Influence new work items & scope plus early warning of activities
	CLG		Attend CEN TC 164/WG2 (General rules for systems and components inside buildings) Bob Chambers + BSI Committee B/504/2 Hayden White, Geoff Miller	Active participation in revision/confirmation of EN 806 & ensure UK practice maintained in final text. Influence design methodology to support functional requirements and UK Water Industry guidance

Objective/ Project	Potential collaborators	Topic Advisor, PAG and Contact	Project Activity	Specific activity in 2011/12 including Water UK Networks
F.2.2 Policing of development of individual product standards to reflect functional requirements (European and UK)	CLG	Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	Attend CEN TC 164/WG2 (General rules for systems and components inside buildings) Rep – Bob Chambers + BSI Committee B/504/2 Reps – Haydn White and Geoff Miller Attend CEN TC 164/WG8 (Sanitary taps) & BSI Committee B504/8 Rep - Paul Taylor Attend BSI Committee B/503 (Sanitary appliances) Rep – Ian Broad Attend CEN TC 164/WG14 (Air Gaps) & BSI Committee B/504/4 Rep - Paul Taylor Attend FSH/18/2 (sprinkler systems) and FSH/18 (fire fighting systems) Rep – Ian Whittaker Attend BSI Committee CH/106/04 Dental Instruments and Equipment Rep – Bob Chambers	Review extent to which existing standards and drafts meet functional requirements (European and UK). Identify way forward.

Objective/ Project	Potential collaborators	Topic Advisor, PAG and Contact	Project Activity	Specific activity in 2011/12 including Water UK Networks
F.2.3 Adequate flexibility (e.g. through the use of different grades or types) to meet the UK water industry's needs		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley		No current activity identified
F.2.4 UK guidance documents reflect best/modern practice and apply across water industry where appropriate/ possible	Defra/ MTP CLG	Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	Information and Guidance notes	Activity allocated to WRAS Technical Committee: Review IGNs to ensure currency and alignment with best practice
			Water Regulations Guide	No current activity identified
			Defra/CLG work on water efficiency – specific to new homes.	Communication of activity into Water UK Standards Programme
			Attend BS PSE/004 – Identification of piping systems.	Input to review of BS1710 - Specification for identification of pipelines and services.
F.2.5 Suitable briefing of Water Regulations Inspectors on guidance		Steve Tuckwell Ian Whittaker Drinking Water Jim Marshall		No current activity identified
F.2.6 Clarification of boundaries between water regulations and building regulations		Steve Tuckwell Ian Whittaker Drinking Water Jim Marshall		Communication of activity in BRAC into Water UK Standards Programme

Objective/ Project	Potential collaborators	Topic Advisor, PAG and Contact	Project Activity	Specific activity in 2011/12 including Water UK Networks
F.2.7 Contributing to standards on rainwater and greywater re-use		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley	Attend BSI CB/506 – Water re-use, CB/506/0-/03 – Greywater systems – Code of practice for installation and CB/506/0-/04 – Greywater systems – Specification for Type Testing.	Contribute to the development of the standards and review extent to which existing standards and drafts meet functional requirements
Objective F.3: To identify best practice in areas where current practice is divergent				
F.3.1 Fluid categories		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley		Activity allocated to WRAS Technical Committee
F.3.2 Backflow prevention devices		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley		Activity allocated to WRAS Technical Committee
F.3.3 Leakage		Steve Tuckwell Ian Whittaker Drinking Water Customers Jim Marshall Rob Wesley		Activity allocated to WRAS Technical Committee: Identify issues that need to be addressed in relation to leakage