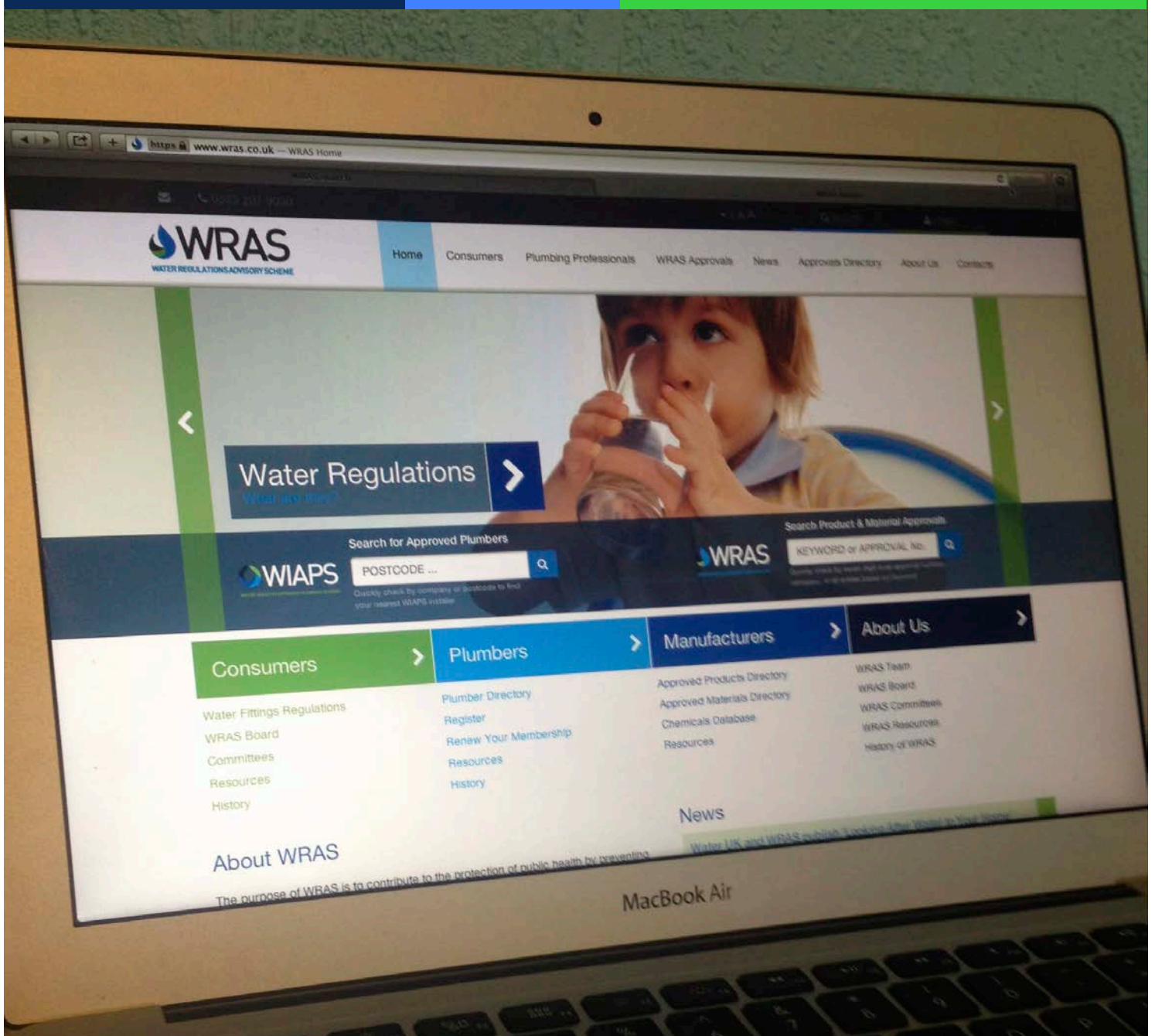




Annual Report 2014/15





Contents

- 3 Chairman's Foreword
- 4 About WRAS
- 5 Governance and Financial Performance
- 6 Business Plan Update
- 7 Subscribers' Survey
- 8 Approved Materials
- 9 Approved Products
- 10 WaterSafe
- 11 WIAPS
- 12 Promoting the Water Fittings Regulations
- 13 Representing Water Companies
- 14 Supporting Water Companies
- 15 Case Studies



Chairman's Foreword

It gives me great pleasure to introduce the Annual Report on the activities of WRAS for the year 2014/15. This is the second report in our new branding, which is now well accepted by all stakeholders.

We continue to progress all the objectives of our 5-year Business Plan details of which can be found on page 6. Of particular importance was the move to new premises and I am pleased to report that there was no disruption to the service we provide to member subscribers, approval applicants and holders or other users of our services.

Financial performance has been sound with a small profit being the outcome. Once again income from approvals increased with record numbers of products being granted.

At the beginning of the year the workshop to progress commitments in our new publication – “Keeping Water Safe in Premises” identified priority areas for new working groups. Details of these groups and their work can be found on page 14.

One of the main objectives in our Business Plan is to improve communications with stakeholders. The year saw the launch of our new website which has been well received by subscribers and other stakeholders alike. Satisfaction levels have increased from 70% to 90% with its introduction and further information on our biennial survey can be found on page 7.

Normally our support for water companies covers the technical aspects of the Regulations. However WRAS continues to take a leading role in the debate over the rules for information exchange to be introduced when competition for non-household water customers commences in 2017. Our intervention in this debate supported by WaterUK and DWI has ensured that

enforcement of the regulations and their importance in maintaining safe water supplies from catchment to tap are regularly on the agenda when competition is discussed. Enforcement of the Regulations once the market opens for competition was the subject of the WRAS Conference in 2015.

That we are able to influence so many areas of water supply owes much to the dynamism and professionalism of the employees of WRAS. My fellow directors and I congratulate them all on another successful year.

Finally I cannot end without paying tribute to Roger Harrington, who retired from the Board in March 2015. Roger Harrington made an invaluable contribution to the board and his wise council will be missed.

Stephen Kay, WRAS Chairman



About WRAS

WRAS Ltd. is a subscription membership company working on behalf of UK water companies.

WRAS's purpose is to contribute to the protection of public health, by preventing contamination of public water supplies and encouraging the efficient use of water, by promoting compliance with the Water Fittings Regulations.¹



WRAS has four core objectives:

1. To raise awareness and understanding of the Water Fittings Regulations¹ through marketing & communications, advice, consultation, education and professional development.
2. To provide approval schemes, processes and guidance to enable organisations and individuals to demonstrate compliance with the Water Fittings Regulations¹.
3. To provide cost effective support to water companies by providing guidance to enable consistent interpretation and enforcement of the Water Fittings Regulations¹.
4. To represent the UK water supply industry as one voice on Water Fittings Regulations¹ and contribute to the development of relevant guidance, codes of practice and standards.

¹ 'Water Fittings Regulations' refers to The Water Supply (Water Fittings) Regulations 1999, The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and The Water Supply (Water Fittings) (Scotland) Byelaws 2014.



Governance and Financial Performance

FINANCIAL PERFORMANCE

WRAS primarily receives income from WRAS subscriptions, Water Industry Approved Plumbers' Scheme (WIAPS) subscriptions, approvals fees and sale of publications. Turnover increased to £1,083,916 in 2014/15, compared to £878,849 in 2013/14.

In 2014/15 WRAS made a profit before tax of £19,649. This compares to a loss before tax of £5,213 in 2013/14. The increase in profit is primarily due to increased income from the product approval scheme.

At the end of 2014/15 members funds were £1,182,580.

A copy of the audited accounts will be sent to water company designated board members separately.

GOVERNANCE

The WRAS Board of Directors provides company governance and directs strategic and financial matters. During 2014/15 the WRAS board met three times.

The directors who served on the company during the year were as follows.

Stephen Kay	South Staffordshire Water plc (WRAS Chairman)
Dymphna Gallagher	Northern Ireland Water
James Foster	Anglian Water
Roger Harrington ¹	Bournemouth Water plc
Mark Handcock	Thames Water Utilities Ltd
Peter D Perry	Dŵr Cymru/Welsh Water
John Rae	Scottish Water
Paul Seeley	South East Water Ltd
Julie Spinks	WRAS Ltd (Managing Director)
Fiona Waller	Affinity Water (Technical Committee Chairman)

¹Roger Harrington retired as a director on 10 March 2015

Business Plan Update

Delivery against the 2013-2017 Plan

Delivered

In the pipe-line

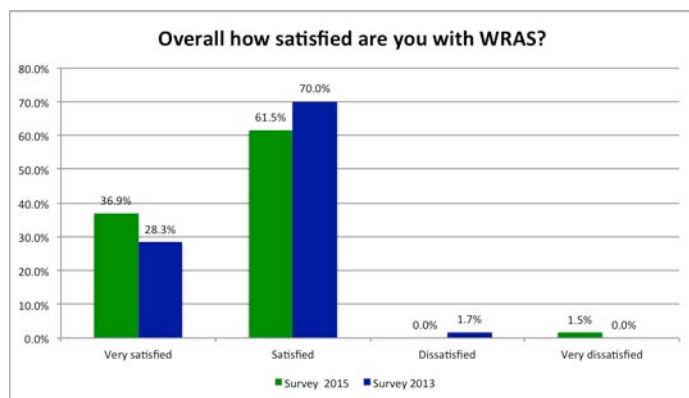
	Delivered	In the pipe-line
Marketing and Communications	<p>New WRAS website and database, which is attracting over 23,000 visitors per month in 2015</p> <p>Re-brand WRAS and trademark protection</p> <p>New Water Company Newsletter</p>	<p>WRAS newsletter</p> <p>WIAPS newsletter</p> <p>Further website development</p>
WaterSafe	<p>WaterSafe launched</p> <p>1347 members from WIAPS</p> <p>17% consumer brand awareness</p>	<p>Addition of sector schemes to website</p> <p>Further PR</p>
Product Approvals	<p>Regular customer surveys</p> <p>New approval routes for manufacturers' accredited laboratories and recognition of other standards</p> <p>Moved into new premises</p> <p>Upgraded product and material</p>	<p>Further website improvements</p> <p>Guidance on filling out the F2 application form</p> <p>Test report guidance for test laboratories</p> <p>Updated sample requirement guidance</p> <p>Preparing for 4MS changes</p>
Supporting Water Companies	<p>New policy 'Keeping Water Safe in Premises'</p> <p>Subscribers' surveys</p> <p>Upgraded members' area on website – 86% satisfied or very satisfied</p> <p>Improved reporting of WRAS activities</p>	<p>Industry measures and industry reporting</p> <p>Regulation 4 (2) guidance</p> <p>RPZ AIM</p> <p>Model processes – notifications, proactive inspection programmes</p> <p>Further website improvements</p> <p>Industry performance measures</p>
Stakeholder Engagement	<p>Engagement plan</p> <p>Open Water</p>	<p>Engagement with MOSL</p>
Resource Plan and Performance Framework	<p>Performance framework</p> <p>Recruitment of 2.9 FTE</p> <p>H&S plan delivered</p>	

2015 Subscribers Survey

There were 81 responses to the WRAS Subscribers survey from at least 15 different water companies.

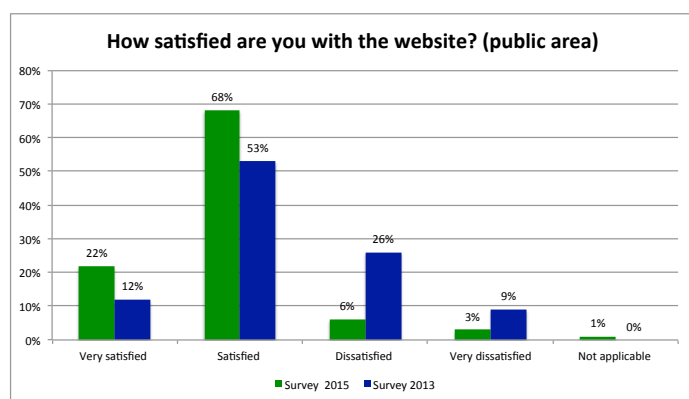
SATISFACTION

Between 2013 and 2015, there was an increase in the number of very satisfied subscribers.



WEBSITE

In particular responders noted the improvements to the WRAS website.



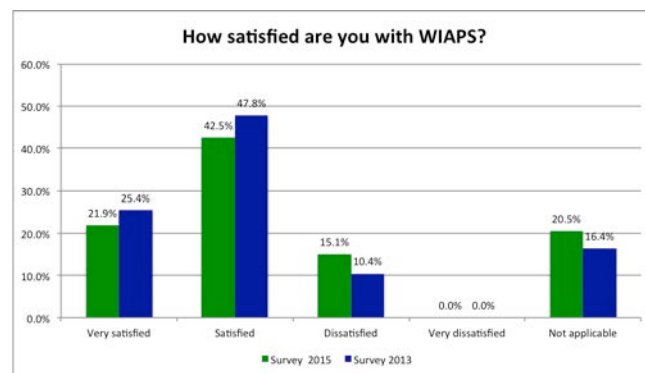
There was positive feedback about the website and 47 suggestions for further improvements. Improvement suggestions included: 11 about the ease of navigation and access; 12 referring to the product and material directory; and 8 concerning access to RPZ tester information.

The WRAS team have already been able to address many of the concerns raised and there are plans for further improvements.

WIAPS

The survey showed WIAPS satisfaction levels decreased slightly.

Of the 28 comments made about WIAPS: 10 were concerned with the workload balance between WRAS and companies; 7 were about communications and updates and; 3 concerned the compliance of approved plumbers with the scheme rules.



The new WIAPS Manager, working with the WIAPS Co-ordinating Group, is using feedback from the survey to plan further improvements.

SUGGESTIONS FOR IMPROVEMENT

There were over 150 comments submitted in the survey, many making helpful suggestions for improvements. As well as comments on the website and WIAPS there were also comments on product approvals, communications and DVDs.

There were 27 comments about the approvals scheme including: 12 about improving the directory; and 6 about improving the speed of approvals.

There were 22 comments concerning communications including: 7 suggesting more updates by email; 5 suggesting more external communication through advertising, promotion and presentations; 3 suggesting water company committee representatives did not keep their teams up to date; 1 comment suggesting more use of teleconferencing; and 1 about facilitating open and honest communications between water companies.

In addition, there were 4 comments about updating 'old fashioned' DVD/videos.

WRAS Material Approvals

WRAS APPROVALS

The WRAS Approvals process is a straightforward way of demonstrating products and materials comply with the relevant requirements of the Water Fittings Regulations.

WRAS approved products and materials are recognised by the water companies who enforce the Water Fittings Regulations, as a suitable way of demonstrating compliance.

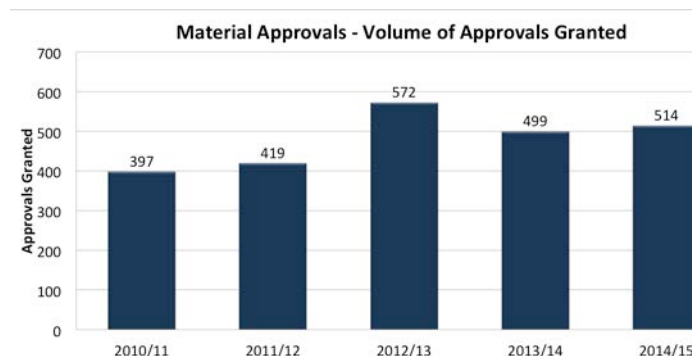
To gain a WRAS approval, applicants must demonstrate their products or materials comply with the relevant requirements of the regulations, by providing acceptable evidence of conformity with either a performance criteria specified by the Regulator or an appropriate equivalent performance specification.

WRAS administers the WRAS Approval schemes on behalf of the water companies. It is the Product Assessment Group (PAG) made up of representatives of the water companies, which grants WRAS product approvals.

MATERIALS APPROVALS

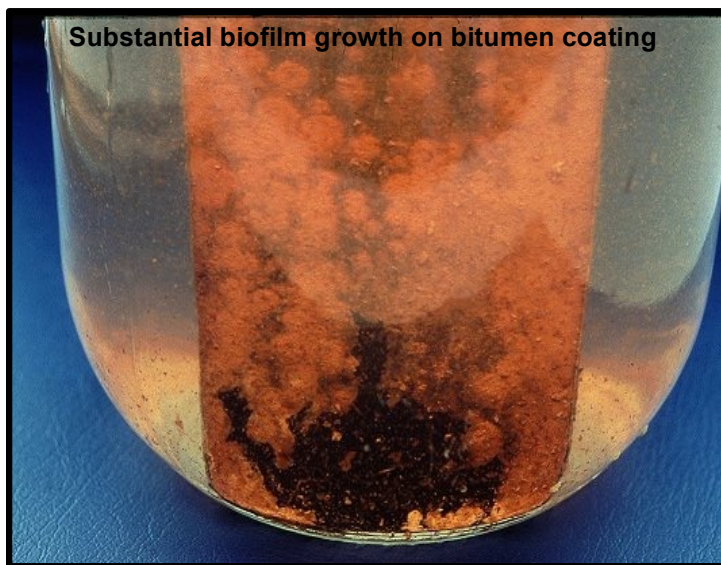
Volumes

On 31 March 2015 there were 2379 material approvals listed in the directory. The numbers of materials approvals granted in 2014/15 was 514. This was a 3% increase, when compared to the previous year. The spike in material approvals in 2012/13 is thought to be due to the Olympics.



Customer satisfaction

Customer satisfaction continues to be high for the materials approval process. In 2014/15 the average percentage of respondents who were satisfied or very satisfied with the service from WRAS was 94.7%, compared to 98.6% in the previous year.



WRAS Product Approvals

PRODUCT APPROVALS

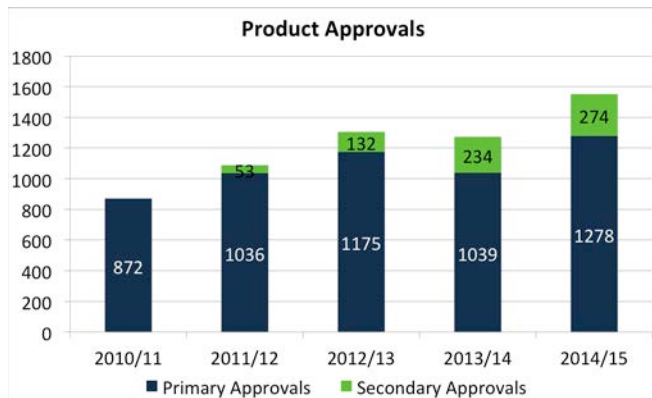
On 31 March 2015 there were 6434 product approvals listed in the online directory. During 2014/15 the number of primary product approvals granted was 1278. This was a 23% increase compared to the previous year.

Secondary approvals

A secondary approval is an approval granted to a rebranded product; because they are identical they require no further testing. The holder of the original approval must give their permission for a secondary approval to be granted.

In 2014/15 274 secondary product approvals were granted. This is an increase of 17% compared to 2013/14. WRAS started recording these types of approvals in 2011/12.

The graph below includes secondary product approvals.



Branding misuse

The WRAS logos are registered trademarks and certification marks. WRAS challenges companies who are suspected of either making false claims about a WRAS approval or of misusing the brand. During the year WRAS contacted three businesses about suspected branding misuse. Of these, two changed their advertising and one is on-going. Since the end of the financial year the number of companies contacted with suspected misuse has increased significantly.

Supporting innovation and new product development

As well as granting approvals the PAG also provides manufacturers with interpretations of the testing requirements and/or a preliminary opinion on product compliance. This may be before a product is committed to production. The PAG provided feedback on 58 manufacturer queries in 2014/15.

Customer satisfaction

In 2014/15, the average percentage of respondents who were satisfied or very satisfied was:

- 75.3 % for the overall process (82.3% in 2013/14)
- 88.9 % for the service from test laboratories (88.7% in 2013/14)
- 80.2 % for the service by WRAS (93.5% in 2013/14)

This represents a decrease in customer satisfaction compared with 2013/14 levels for the overall process and the service from WRAS. Respondents made a number of suggestions for improvement including:

- more challenge on brand misuse,
- PAG meetings every two weeks,
- speeding up approval time,
- better liaison between WRAS and test laboratories,
- introduction of a certification option for continuous approval,
- guidance to support understanding of the test code sheets,
- improvements to the application form, approval documentation and directory description.

There were also comments related to the performance of test laboratories.

Improvements

As part of the business plan WRAS has been seeking ways to improve the product approval process. The main improvement in the year was the implementation of the new website, including a new look directory. The website content for approvals was also updated. This year further improvements to the website are planned. For example the automation of approval letters should speed up the issuing and distribution of approval documentation.

During the year WRAS provided support to a major manufacturer who successfully gained UKAS accreditation for a number of test codes sheets relevant to specific products in their range. This will allow them to submit test reports directly to WRAS when seeking product approvals.

Since the end of the year, WRAS has appointed an additional member of staff to focus on key administration tasks. This has increased the number of investigations into potential brand misuse and sped up issuing of approval documentation.

WaterSafe

APPROVED CONTRACTORS' SCHEMES

Water Fittings Regulations include a provision to establish approved contractors' schemes. A water company or an organisation approved by the Secretary of State can set up a scheme. There are seven approved contractors' schemes operating across the UK.

WATERSAFE

WaterSafe is a dedicated online search facility which consumer can use to find their nearest qualified plumber. It brings together the UK's seven approved contractors' schemes for the very first time.

It is a unique partnership between water companies and professional/trade associations from within the plumbing sector. WaterSafe is strongly supported by government and all UK water quality regulators.

WaterSafe is free to join and use. In order to be featured on the WaterSafe website, a business must be an eligible member of an approved contractors' scheme, and opt to become part of WaterSafe. Costs for becoming a member of an approved contractors' scheme vary.

WaterSafe approved businesses must adhere to customer commitments, conditions of membership and scheme rules.

WaterSafe Installers' Scheme Limited was launched in October 2013. By March 2015 the Scheme recruited 1504 approved businesses employing 3024 qualified plumbers. Website traffic has steadily risen and achieved 6608 visitors in March 2015.

Working with WaterSafe, WRAS contributed to the production of 224 news items, promoting WaterSafe, during the financial year. These news items had a potential audience of 13 million and were broadcast on radio, and published online and in print.

In addition, WRAS supported two Severn Trent events by creating a bespoke WaterSafe flyer. Severn Trent Water organised two 'Meet the Regulator' open days to promote awareness of the Water Fittings Regulations and WaterSafe to BSS installer customers.

A brand survey of 2000 consumers in December 2014 revealed that 17% of respondents recognised the Watersafe brand.



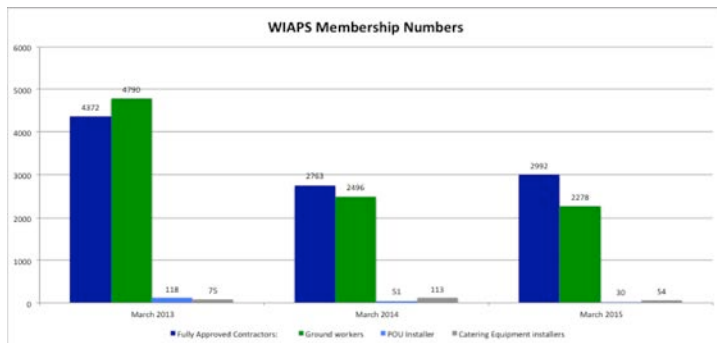
WIAPS

WIAPS

WIAPS is the Water Industry Approved Plumbers' Scheme, run by WRAS on behalf of sixteen English and Welsh water companies. WIAPS is the largest of the seven existing approved contractors' schemes in the UK.

At the end of March 2015 there were 5354 members of WIAPS including members of sector schemes. This was a small reduction from 2014, primarily due to turnover of ground-worker members. In 2014 WIAPS changed the way it calculates membership, excluding members who had left their employer and individuals who had not renewed their cards. This method of calculating membership is more accurate and reflects current membership displayed on the website.

During the year 758 new members were recruited, this compares to 522 members recruited in 2013/14



Promotion

From April 2014-March 2015 WIAPS undertook a variety of promotional activities, from attending trade shows to delivering presentations to college lecturers. In January 2015, WIAPS attended the National Housing Maintenance Forum Conference in Stratford upon Avon, and during February, March and April 2015 attended the 6 HIP! meet the lecturer events around the UK.

Improvements

In January 2015 WRAS appointed Gareth Harris as the new WIAPS Manager. During the year WIAPS embedded new annual checks to ensure that individuals are still employed and that insurance is in place, as required by the scheme.

WIAPS has also been working with the three main awarding bodies, which operate under Summit Skills (City & Guilds, BPEC and Excellence Achievement and Learning Limited) to assess further qualifications that may be accepted for scheme membership. WRAS also appointed a second trainer assessor to support our water regulations courses.

The WIAPS co-ordinating group has approved a new audit procedure for the auditing of WIAPS members.



Promoting the Water Fittings Regulations

PROMOTION

WRAS continued to promote the Water Fittings Regulations by publishing information, answering technical enquiries, giving presentations and providing articles for magazines and trade/professional journals.

MARKETING AND COMMUNICATIONS PLAN

Website and branding

In 2014 WRAS completed a new website and rebranded. The new website went live on 29 September 2014. At the same time WRAS implemented new branding for WRAS, WIAPS as well as WRAS product and materials approvals. WRAS developed brand guidance to help ensure correct usage by approval holders and other authorised logo users.

Exhibitions and conferences

WRAS collaborated with a number of water companies to promote Water Fittings Regulations and WaterSafe at various events and exhibitions during the year. Details of the WIAPS and WaterSafe exhibitions led by WRAS, are included in the WaterSafe and WIAPS reports.

Media

WRAS supported WaterSafe PR during the year. Further details can be found in the WaterSafe section of this report.

WRAS also published twelve technical articles in P&HE, Installer, SoPHE newsletters, H&V News, Installer, YourBuild, iBuild, Heating & Plumbing Monthly, HPM Plumbzine, Education & Training Matters, Newly Qualified Installer and HIP!. These covered a range of topics including: the regulations, the sale of 'illegal' non-compliant products, douches, lead pipe, cold water storage, water pumps and preventing backflow.

PUBLICATIONS

Working with water companies, WRAS facilitated and published 10 new or revised interpretations and advice relating to cold water storage cisterns.

During the year WRAS, in collaboration with Water UK, produced an updated consumer guide 'Looking After Water in Your Home'

Sales of the Water Regulations Guide increased to 2613 copies – 10% more than in 2013/14 when 2369 copies were sold.

TECHNICAL HELPLINE

WRAS provides a technical enquiry line to help individuals comply with the Water Fittings Regulations. This is free at point of use and funded through water company subscriptions.

During 2014/15 WRAS responded to 834 enquiries, 80% of enquires were by phone and 20% by email. The most common area for an enquiry was hot and cold water systems (58%), followed by backflow (31%). WRAS was contacted most frequently by installers or contractors (53%), followed by premises owners or occupiers (21%).



Representing Water Companies

Stakeholder engagement

WRAS represents water companies in matters relating to the Water Fittings Regulations.

During 2014/15, we updated the stakeholder engagement plan, which sets out our stakeholder engagement priorities for the year. WRAS employees attended over 55 events, making contact with 646 people. These engagement events included a range of meetings, presentations, workshops and dinners.

Trade and professional associations provide effective communications channels as they have extensive networks of businesses and individual members. During the year, WRAS had meetings with twelve trade and professional associations to discuss matters of common interest.

WRAS also met with government and regulators including: Defra, Drinking Water Inspectorate, Open Water and the Water Health Partnership for Wales. WRAS provided feedback on the HSE's consultation for legionella control.

Open Water

Normally our support for water companies covers the technical aspects of the regulations. However WRAS has taken an active role in the debate over new codes, to be introduced when retail competition for non-household water customers, in England, commences in 2017. These codes govern how market participants will interact. Our intervention in this debate, supported by Water UK and DWI, has ensured enforcement of the regulations and their importance in maintaining safe water supplies from catchment to tap are regularly on the agenda. We have made every effort to ensure there is no conflict between water companies' ability to carry out their statutory enforcement duties and the codes. We are pleased to report these codes, now incorporate the majority of the amendments that WRAS members requested. WRAS will now focus on supporting water companies in their preparation for market opening.

Standards

WRAS continues to actively support the development and revision of British Standards to ensure UK requirements are properly accounted for. WRAS is represented on the Water UK standards board and acts as topic advisor for water inside buildings. WRAS is a member of a number of standards committees:

- B/504 covering water supply including water fittings;
- CB/506 for water re-use; and
- EH/6, which considers the effects of materials on water quality.

During the year, WRAS representatives were directly involved in the review and development of five British Standards and one guidance document:

- BS 6920 testing non-metallic materials in contact with drinking water;
- BS 1710 the identification of pipelines and services;
- BS 1212-4 float operated valves;
- BS 8551 the provision and management of temporary water supplies;
- BS 9251 domestic fire sprinklers systems; and
- PD 855468 flushing and disinfection of services supplying water for domestic purposes.

In addition, WRAS provided feedback on eight other British Standards.

WRAS continues to contribute to the on-going development of European standards for:

- rainwater harvesting;
- a draft standard for Type AB air gaps incorporating a hygienic protective screens; and
- revisions to the requirements for devices to prevent pollution by backflow.



Supporting Water Companies

Technical Support Groups (TSGs)

All WRAS members are entitled to be represented at one of the two regional Technical Support Groups. Identical agendas are discussed at both. These groups act as an information hub for water fittings teams, giving company representatives the opportunity to network and identify appropriate solutions to technical issues relating to interpretation and enforcement. Their recommendations are reported to the Technical Committee.

Over the year there were four meetings of the TSGs, at which 53 technical papers and numerous other reports were discussed.

Technical Committee

The Technical Committee is appointed by, and reports to the WRAS Board. It is responsible for setting technical policy. The Technical Committee met three times over the year to discuss recommendations made by the TSGs, reports from working groups and other technical matters including the potential impact of retail competition on water fittings enforcement in England.

During the year, the Technical Committee approved for publication 10 new or revised interpretations and advice relating to cold water storage cisterns. The Technical Committee also approved new and revised technical advice for water companies. In September 2014 the Technical Committee made a number of appointments to the Product Assessment Group (PAG), including that of a new Chair.



Working Groups

Six working groups were active during the year:-

- proposing industry performance measures to monitor progress and demonstrate implementation of the 'Keeping Water Safe in Premises' policy document
- formulating areas of best practice to facilitate consistent interpretation and application of the Water Fittings Regulations/Byelaws
- developing proposals to promote notification (regulation 5) and the submission of contractors' certificates (regulation 6)
- reviewing the RPZ AIM and developing related best practice
- developing guidance to enable consistent assessment of evidence provided to demonstrate compliance with regulation 4 (2) (suitability of water fittings)
- reviewing a number of interpretations related to hose use

The first three of these groups were set up in response to recommendations made by WRAS members at a national workshop held in spring 2014. The topics being covered by these groups, and the Reg 4(2) WG, were all identified by delegates as key areas which could have a significant positive impact on effective enforcement, benefitting, both the industry and consumers.

The working group looking at consistency played a significant role two key areas of work. The publication of the revamped industry newsletter, now called 'Regulation Matters' (the first edition published in March 2015) which has been well received. The WRAS 2015 conference 'Preparing for retail competition' (held this financial year). Speakers at the conference included Milo Purcell (DWI) and Jessie McLeman (Open Water).

Case Study – Regulation 4 Compliance

In spring of 2015 a water company from the South of England received an application for a new water supply. The applicant was an owner of a large estate, which had been traditionally served by a private borehole. The estate owners had decided to lease the manor house out to a new tenant. The manor house had planning granted to change its use into top end accommodation and eatery.

Under Regulation 5 the water supplier asked for plumbing schematics, fitting schedules and a signed declaration of conformity with the Water Supply (Water Fittings) Regulations 1999 (Regulations) prior to works commencing. Plumbing schematics were duly received but contained insufficient information with the omission of a water fittings schedule. Consent under Regulation 5 was therefore withheld.

A site inspection by the water company's regulations officer to discuss their proposed installation in further detail followed.

On arrival it was found that works on the plumbing system had indeed commenced with £26,000 worth of taps and shower fittings on site ready to install. However further investigation revealed that the fittings did not comply with the requirements of regulation 4(2). The water supplier therefore prohibited their installation.

With the project now on hold it was necessary to source replacement compliant fittings. An alternative would be for the manufacturer to submit those fittings already purchased for performance testing that would satisfy the requirements of regulation 4(2), such as WRAS approval.

The Estate owner was aware that compliance with the Regulations would not be necessary if the tenant remained on borehole water. Due to the Estates contractual obligation to the new tenants the water supplier was asked to consider providing a water supply from their town main terminating at the boundary for connection at a later date. However what was not so clear to the Estate owner is that he would no longer be under sole dominance of private water supply legislation. Following connection to the town water main powers vested in the local water company would come into effect.

Although the borehole supply remains the source of supply this has been a successful process for the water supplier. Lessons have been learned that the water suppliers Regulations apply if a town main connection is provided on sites where private bore holes exist. The land owners, tenant, fittings manufacturer and supplier are aware that water companies require confirmation of test house approvals or an equivalent BS/BS EN for water fittings.

In turn manufacturers have risked losing credibility in the supply chain, particularly with the accommodation owners.

All this could have been avoided if the process of Notification under Regulation 5 had been correctly managed. With joint legal powers the water supplier maintains a close working relationship with the Local Authority, in which these premises currently sit.



Case Study – Easibake Foods Local Authority Perspective

A borehole was installed in around 2008 by Easibake Foods Ltd, who produce specialist bread products for a major international sandwich chain and a number of national catering companies and supermarkets. This private water supply was used as a food ingredient, and for cooling tanks and condensing equipment.

The factory is in an industrial area with historical industrial and manufacturing uses. Adjacent to Easibake Foods Ltd is a car plant factory, and also a defunct waste disposal site previously used for the incineration of industrial and hazardous waste material.



On 2nd December 2013, the mains water supply used for staff welfare was disconnected by Dŵr Cymru Welsh Water due to noncompliance with statutory notices relating to water fittings infringements, leading to a significant risk of back-siphonage of untreated borehole water entering the public water supply.

By coincidence, a water sample from the private water supply was taken that same day by Torfaen County Borough Council as part of their statutory duties under the Private Water Supplies (Wales) Regulations 2010. The results showed a potential presence of volatile organic compounds (VOC's), and further samples taken in January 2014 confirmed the presence of Trichloroethene at a level of 210µg/l. The legal limit is 20µg/l.

On the advice of Public Health Wales, the Food Standards Agency Wales and the Drinking Water Inspectorate, a Regulation 18 Notice under the Private Water Supplies (Wales) Regulations 2010 was served. This restricted the use of borehole water as an ingredient in food processing or for drinking water, and resulted in food production ceasing pending further investigation. As a further precaution, all bread products made with potentially contaminated water between 2nd December 2013 and 30th January 2014 were subsequently detained and withdrawn from customers.

In February 2014, Magistrates condemned the affected bread products as they had been made with water that failed to comply with the water quality standards and, as a consequence, failed to comply with food safety law. The Condemnation Order required the destruction of all affected products.

The investigation concluded that there was a likelihood that a combination of the significant rate of unlicensed abstraction (believed to be 150,000 litres a day), along with unprecedented weather conditions and high levels of ground water, may have led to contamination being drawn in from an offsite source of Trichloroethene.

On the 8th May 2015, Easibake Foods Ltd were fined £3000 (plus £120 victim surcharge) and the Managing Director was separately fined £500 (plus £50 victim surcharge) for the abstraction of water from a source at or above the permitted level without having obtained a license from the relevant statutory body.

Easibake Foods Ltd were also fined £2,000 for the failure to ensure an adequate supply of potable water was used whenever necessary to ensure that foodstuffs were not contaminated.

Torfaen County Borough Council were awarded partial costs totaling £15,000. Although disappointing, given the seriousness of the case, the courts had taken into account that the withdrawal and destruction of affected products, plus the loss of trade, had cost the company almost £1 million.

Alison Hughes and Jason Austin
Torfaen County Borough Council

Water company perspective

A pre-arranged visit had been made to a food manufacturing company, as part of a water companies program of water fittings inspections of high risk premises.

The Regulation Officer met with the Operational Manager and maintenance staff of the company to outline in more detail the reason for the inspection. The Operational Manager explained the site had expanded significantly and as a result had installed a borehole. The mains water supply (MWS) was connected to this system but it was not currently in use and turned off inside the unit.

This inspection revealed an infringement of the Water Supply (Water Fittings) Regulations 1999, in that there was a private borehole water supply cross connected to the supply coming from the water main. This cross connection did not have adequate backflow protection between the two sources and this was categorised as a fluid category 5 risk in accordance with the Regulations.

The Regulation Officer served an infringement notice and imposed a 28 day time limit for the remediation works to be undertaken. To mitigate the risk a check valve (NRv 2 type) was fitted to the boundary stop valve to provide whole site protection. A follow up visit confirmed that part of the remedial work had been completed with a physical air gap provided to the MWS where it entered the building. The food company further advised after a number of meetings that they were not prepared to undertake all the remedial work within the time period and had commissioned a second borehole. As a result the MWS was no longer required, as they believed there was a sufficient supply of water from the borehole supply to serve the site.

The water company informed the local authority immediately that the MWS would be disconnected and further advised the food company that the water supply would then fall under the Private Water Supply Regulations (Wales) 2010 for quality checks and testing. The local authority confirmed they were aware of the borehole supply and had previously taken samples at the site. The water company duly disconnected the supply in the highway.

The local authority continued with its sampling program over a period of time. This demonstrated that the borehole water had become contaminated and did not meet the required quality standards in the Private Water Supply Regulations (Wales) 2010 and therefore issued the food company with a notice which restricted any use of borehole water for food production purposes.

The food company made contact with the water company requesting the MWS be restored to the site due to contamination of the borehole. They were advised that a reconnection was not possible until a full water regulations inspection of all their internal pipework had been carried out, all internal pipework flushed and chlorinated and satisfactory water samples obtained with a visual inspection of the borehole to ensure complete separation with MWS.

The water company arranged for samples to be taken throughout the site to ascertain the extent of the contamination and to assess the effectiveness of the remedial actions (flushing and cleaning of the system).

The test results were reviewed and assessed in collaboration with Public Health Wales, Drinking Water Inspectorate, Local Authority EHOs and Food Standards Agency.

It was agreed to reconnect the supply, but only to allow for flushing and disinfection of the internal pipework to proceed and for a full water fittings inspection to be undertaken in the premises.

The inspection revealed further contraventions of the Water Supply (Water Fittings) Regulations on the internal pipework and fittings. The infringement notice for remediation of those contraventions was served. The food company were advised that the mains water supply would not be restored until the high risk infringements had been rectified and the results of the water samples met the quality standards in the Water Supply (Water Quality) Regulations 2010 Wales. The remedial work was immediately undertaken to satisfactory conclusion and the borehole supply was physically disconnected.

Water company staff (including samplers, water quality advisors and water fittings inspectors) spent over a week on site between them and over 180 water samples were taken for laboratory analysis during this time.

This incident has provided valuable learning that has been incorporated into the water companies operational practices including; targeted bore hole supply inspections, pipe work size and impacts to water quality, increased inspection focus on the internal arrangements within food manufacturing facilities.

Case Study – Identifying backflow using meter information

This year marks the 20th anniversary of the water quality incident in Freuchie, Scotland that led to hundreds of people contracting sickness and diarrhoea and a whole village requiring inoculation against hepatitis. The incident was caused when the public water supply became contaminated due to backflow at a connected farm premises.

Unfortunately, the circumstances that led to this major incident continue to exist and in recent years the DWI has used the Chief Inspector's Report to highlight a series of similar cases that could have been much worse. These cases serve as a reminder of the continued need to review risk assessment procedures to ensure they continue to provide effective protection against the risk of contamination from backflow.

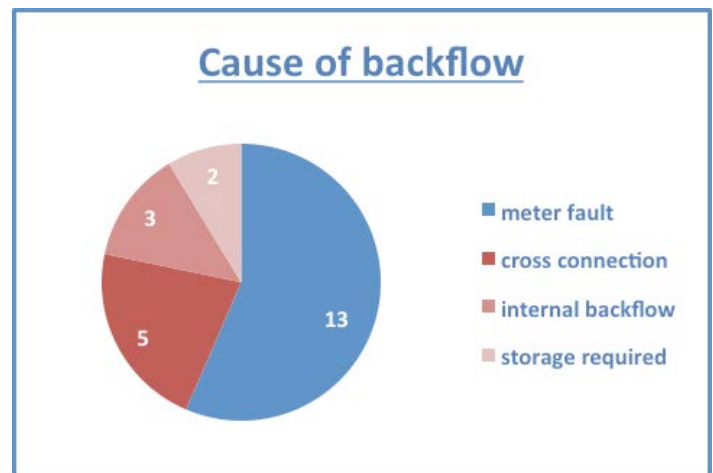
One way of reducing this risk is for water fittings teams to engage with and educate metering teams and to actively target premises where there is evidence of backflow.

Yorkshire Water have found that the introduction of automatic meter reading (AMR) technology has improved both the efficiency of reading a meter and the interrogation of the consumption information that is gathered. Significantly, billing software can be developed to highlight where negative consumption has been recorded and a backflow alarm indicator can be used to create an on-site investigation.

The results of a recent programme undertaken with the metering team to identify backflow are shown in the chart above.

The results highlight several key points for water fittings teams. Firstly, the value of using metering information as a public health measure to safeguard the wholesomeness of the public water supply is evident by way of the five cross connections that were identified and resolved following an inspection. However, from a resourcing perspective, a clear process needs to be agreed so that a metering investigation is also undertaken as the majority of cases can be attributed to common meter faults.

In April 2017 the changes to the retail market may limit the metering information available to water fittings teams to readings taken for billing purposes. This is particularly concerning as it would have restricted the ability to identify three of the cross connections above.



N.B.

Internal backflow, refers to backflow from internal sub-meters rather than the main billing meter.

Storage required, relates to the installation of booster-pumps, leading to pressure surges and backflow recorded at the meters of neighbouring properties. These booster pumps should have been notified.

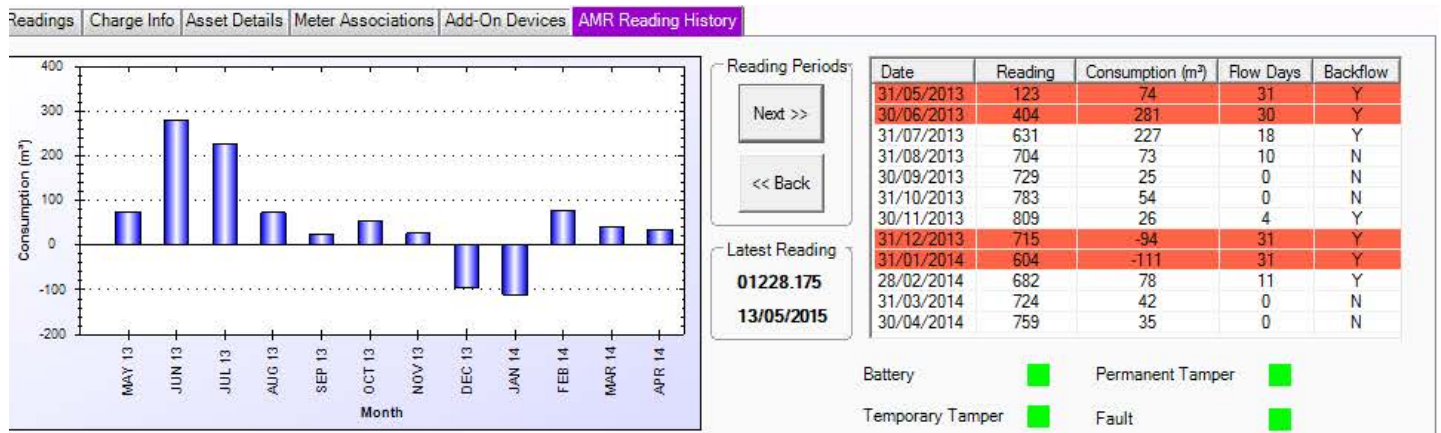


Case Study – Identifying backflow using meter information

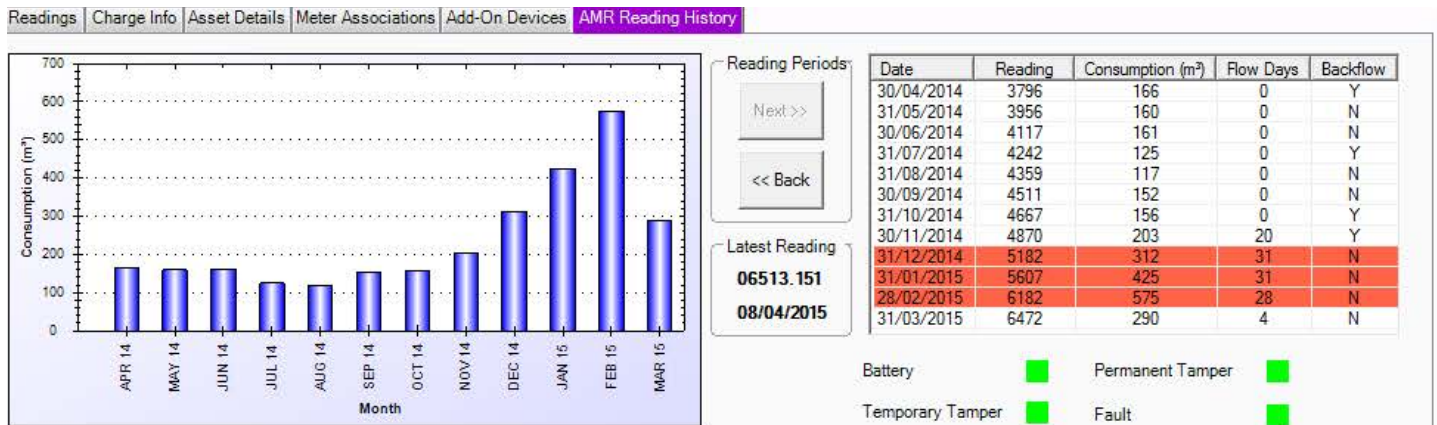
In the examples below, both case studies had cross connections but these could not have been identified through annual consumption figures alone. Unless monthly consumption information and the facility to capture backflow within the month are made available to wholesalers or there is sufficient training of retailers to identify backflow then the

ability of water fittings teams to address the risk of contamination from backflow will be inhibited. Water fittings teams have made great progress since Freuchie 20 years ago but the focus on backflow contamination must remain to prevent future incidents.

Case study 1: Backflow clearly identified over two month period as total monthly consumption turned negative



Case study 2: Backflow occurs sporadically over a six-month period but total monthly consumption remains positive and increases over the year.





Water Regulations Advisory Scheme Limited is a company registered in England.
Registered office address: 6D Lowick Close, Hazel Grove, Stockport, Cheshire, SK7 5ED
Company registration number: 06663930
Contact WRAS on: 0333 207 9030 email: info@wras.co.uk www.wras.co.uk