Requirements & Code of Practice for WRAS Approvals Schemes

Abstract: This clarifies the way the WRAS Product Approval Scheme operates and sets out the Roles and Responsibilities of all parties involved in the WRAS Approvals process. Compliance with this Code of Practice is mandatory and together with the Terms and Conditions of the Approval Scheme form a legally enforceable agreement between WRAS and its Clients (Applicants and Approval Holders). Compliance with this Code of Practice is mandatory and together with the Laboratory Agreement form a legally enforceable agreement between WRAS and its Recognised Test Laboratories.

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Version	Issue Date	Summary of change(s)
WRAS.Cust-402 Ver 1.0	20/10/2020	New Document
Ver 2.0	01/04/2021	Revised for Water Regulations Approval Scheme LTD
Ver 3.0	10/12/2021	Para#46: Addition that in the event that confidential information must be disclosed due to legal request the client will be informed by WRAS that the information has been provided and the reasons why.
Ver 4.0		Para#71: clarification that all Recognised labs must be accredited to ISO 17025 #76: Requirement to notify WRAS of operational issues that may affect analytical quality #77 Advice given to clients #78: laboratory records #80: sub-contracting of testing #88: Report requirements #92-93: testing on customer sites #101: pre-production & prototype testing #106-133 –Guidance for Material Laboratories previously included but subsequently removed from WRAS.Appr-310 "Material Guidance on the Application Requirements for WRAS Material Approval

Introduction

1 The ownership and operation of the Water Industry's approval schemes for Fittings and Materials was transferred to The Water Regulations Advisory Scheme Limited (company number 06663930) on the 1st April 2009. In April 2021, the Water Regulations Advisory Scheme Limited changed its name to Water Regs UK Limited (company number 06663930). Ownership of the established certification schemes for the approval of water products and materials was transferred to Water Regulations Approval Scheme Limited (company number 13032384) (**WRAS Approvals, WRAS**) on the 1st April 2021.

2 WRAS is a wholly owned subsidiary of Water Regs UK Limited.

3 WRAS approvals is a voluntary scheme and is one route to demonstrate compliance with Regulation 4(1)(a) of the Water Supply (Water Fittings) Regulations 1999, which require every water fitting to be of 'an appropriate quality and standard'.

4 A product only qualifies for approval if WRAS is satisfied that it complies with Regulation 4(1)(a) and the requirements of the Scheme, when installed in accordance with the manufacturer's instructions and any applicable Approval Scheme Installation Requirements and Notes. The requirements of the scheme will take account of the requirements in Regulation 4(3) and Schedule 2 of the Regulations where they relate to the design and manufacture of the material and water fitting.

5 An Approval is not a comment on whether a product is 'suitable for the circumstances in which it is used' for the purposes of Regulation 4(1)(b), nor is it a comment on compliance with any requirements of Regulation 4(3) or Schedule 2 of the Regulations relating to the installation of a water fitting. However, WRAS may decline to complete its assessment of a product or to grant an Approval if it appears to WRAS that the Product is unlikely to comply with Regulation 4(1)(b) or Schedule 2 in ordinary use.

6 A Material only qualifies for Approval if WRAS is satisfied that the relevant Material complies with Regulation 4(1)(a) and Schedule 2 Paragraph 2 of the Regulations and the requirements of the Scheme when used in accordance with the manufacturer's instructions.

7 A decision by WRAS to grant, renew, alter, or withdraw an Approval is based on the information WRAS holds about the Product and the applicable specifications and standards referred to in the Regulation at the time it makes the decision.

8 Where a specification or standard referred to in the Regulation is capable of being interpreted in different ways, WRAS will adopt the interpretation that it considers to be the most appropriate based on the information available to WRAS at the relevant time. WRAS may adopt a different interpretation in future if there are changes to the specification or standard or to the information available to WRAS. WRAS cannot guarantee that the courts or anybody involved in enforcing the Regulations will adopt the same interpretation as WRAS.

9 Specific WRAS Approvals requirements may also be applicable in addition to those required by the Regulations.

10 WRAS product and material approvals schemes are managed following the requirements of ISO 17065 the International Standard for the conformity assessment of bodies certifying products. To ensure that everyone involved in the schemes, including Applicants, Testing Laboratories and Stakeholders, understand the process and their roles in it, and to prevent any overlap or duplication of service, the responsibilities of each contributor are set out below.

11 The definitions in document WRAS.Gen-601: "Terms & Definitions" shall apply throughout.

WRAS Product Approvals Scheme

12 WRAS Product Approval will only be granted to production samples.

13 WRAS Product Approvals are valid for a five-year "Approval Period" following the date of approval. This may be subject to a self-declaration of continued compliance being completed annually by the Approval Holder and agreement to periodic surveillance by WRAS.

14 To extend an Approval beyond the initial five-year term, the product must be re-tested in line with the Scheme Requirements and resubmitted for assessment **before** the expiry of the approval. It is the responsibility of the Approval Holder to maintain a current and valid WRAS Approval.

15 A WRAS Product Approval is only valid if the approved Product is manufactured and installed during the Approval Period.

16 Only those products described and listed under the heading "Model" in the approval documentation and Directory entry, are approved by WRAS and covered by the scope of the Approval.

17 The scope of the Approval does not extend to rebranded products. The Secondary Approval Scheme can be used for rebranded products.

18 A WRAS Product Approval is only valid where all components and materials used within the models listed retain individual WRAS Approval.

19 Where any modifications are made to the Product, WRAS must be informed by the Approval Holder and the modifications approved in accordance with clause 62 and 63 below.

20 An Approval Holder may submit an application to extend the Approval Period up to nine months before the expiry of the Approval Period in accordance with clause 67

WRAS Materials Approvals Scheme

21 To qualify for WRAS Approval, non-metallic materials intended to be in contact with wholesome water must not cause, or be likely to cause, contamination of water.

22 A WRAS Materials Approval indicates that the material has satisfied the testing requirements of BS 6920 or equivalent.

23 WRAS Materials Approvals are valid for a five-year "Approval Period" following the date of approval. This may be subject to an annual self-declaration by the approval holder of continued compliance with the scheme requirements and agreement to periodic surveillance by WRAS determined by a risked based approach. To extend a WRAS Approval beyond the initial five-year term, the material must be re-tested in line with the scheme requirements and resubmitted for assessment before the expiry of the approval. It is the responsibility of the Approval Holder to maintain a current and valid WRAS Approval.

24 Only those specific materials which are listed on the Scheme Directory are WRAS Approved Materials.

25 The scope of the Approval does not extend to rebranded materials. A separate secondary process is available for approving rebranded materials.

26 Where any modifications are made to the material, WRAS must be informed and the modifications approved in accordance with clause 63 and 64 below.

27 An Approval Holder may submit an application to extend the Approval Period up to nine months before the expiry of the Approval Period in accordance with clause 67

Impartiality

28 WRAS is committed to ensuring that the Scheme operates in an impartial manner. The WRAS Impartiality Policy (WRAS WRAS.Admin-103) explains what impartiality means in the context of the Scheme, and the practical steps that WRAS takes to promote impartiality. This includes WRAS's procedures for identifying and managing any potential conflicts of interest. WRAS requires its employees, contractors, and committees to adhere to that policy.

Roles and responsibilities of WRAS Approvals

29 WRAS Approvals is responsible for administering the WRAS Products and Materials Approvals Schemes. As primary functions for this purpose, it undertakes to:

a. Administer the Approval Schemes in accordance with the requirements of ISO/IEC 17065.

b. Provide pre-application advice and answer queries relating to all aspects of the WRAS Approvals processes. WRAS will not provide advice or consultancy on the design of water fittings.

c. Assess samples for Product Approvals to confirm product identification, description and categorisation detailed in the applications.

d. Where appropriate, recommend the tests required for the Approvals Schemes; to comply with the appropriate Regulations and identify what samples should be provided for such testing in accordance with the WRAS Guidance documentation and communicate this to the customer.

e. Evaluate the technical information submitted for WRAS Products and Materials Approval to ensure that the requirements of the Scheme have been met in full.

30 For Product Approvals the technical information normally required for the evaluation will include, but is not limited to:

a. Completed Application Form

b. Schedule of materials, any associated formal confirmations/declarations and BS6920 reports

c. Schematics

d. Installation guides and manuals where applicable.

e. A photograph of the product suitable for inclusion in the on-line Directory.

f. Photograph(s) of the product markings suitable for inclusion in the on-line Directory.

g. Confirmation of age of test sample (s)

h. Test Report(s) when available – Note this may be submitted after the application.

31 For Material Approval the technical file will contain, but is not limited to:

a. Completed Application Form,

b. Test reports covering the appropriate tests required by BS 6920 – Note this may be submitted after the application,

c. Instruction and data safety sheets where required.

32 For product approvals, the product description summary sheet provided by the Laboratory, including the draft directory entry of the complete product description, will be reviewed and updated to include the WRAS Approval Assessor's recommendations.

33 The decision whether to grant a product approval will be made WRAS Approvals decision maker.

34 Following the decision to grant an Approval, prepare the WRAS Approvals Certificate for successful applicants and advise applicants of the decision regarding approval of their product(s). Approvals granted do not indicate endorsement by water companies or any other organisation.

35 Liaise with the applicant in cases where applications are deferred. Sometimes the application evaluation process may recommend deferring the approval of an application for WRAS approval pending further clarification or additional information. The issues which lead to the application being deferred will need to be resolved and re-presented before the Approval is granted. Deferrals should be resolved within 6 months of the date deferred.

36 Publish WRAS Approvals on the WRAS Directory.

37 Review and publish the WRAS Approvals Scheme Guidance documentation and other information relevant to WRAS Approvals.

38 Generate, identify and encourage good practice which will support and improve the services offered by the Scheme.

Role of the PAAG – Product Approvals Advisory Group

39 The WRAS Product Approvals Advisory Group (PAAG) is a panel of experienced assessors. The panel do not represent any organisation in undertaking this role.

40 The members are appointed by the WRAS Managing Director.

41 This group review products for compliance with the requirements and objectives of the Scheme and make recommendations regarding the Approval.

42 PAAG - The decision whether to grant approval is made by the Approvals Manager, taking into consideration the recommendation of the Approvals Team and the advice of the PAAG.

Role & Responsibilities of Applicants and Approval Holders

During Application

43 Applications for WRAS approval can be made by the manufacturers of product or materials, importers, Factors (e.g. reseller or wholesaler) or their agents.

44 The Applicant / Approval Holder undertakes to co-operate fully with WRAS in relation to the approval process. The Applicant shall provide WRAS with any information required. This may include, but is not limited to, samples and evidence of the purchase of components and materials used.

45 Applications may be made directly to WRAS Approvals, or be made via WRAS Recognised Test Laboratories.

46 The Applicant must provide accurate and contemporaneous information to WRAS in support of the application. This information includes, but may not be limited to:

For Products:

a. Completed application form (F2)*
b. Schedule of materials, any associated formal confirmations/declarations and BS 6920 reports***
c. Product schematics ***
d. Installation guides and manuals where applicable. **
e. A photograph of the product suitable for inclusion in the on-line Directory *
f. Photograph(s) of the product markings suitable for inclusion in the on-line Directory. *

For Materials:

a. Completed Application form (M2) *
b. BS 6920 Test reports including declarations of conformity***
c. Data Safety Sheets, where required**
d. Chemical formulation***
e. Details of any biocide used within the material, including chemical composition and supplier**
f. Instructions for use as supplied to customers. **

** Items that will be included on the WRAS Directory*
*** Information owned and provided by the Applicant that is already in the Public Domain*
**** Confidential information which will not be published or disclosed, unless required by a Court of Law, or with the permission of the Approval Holder. If such disclosure is required, the client will be informed by WRAS that the information has been provided and the reasons why.*

47 On request, the applicant shall submit a sample of the product to WRAS to allow the description, category and marking to be confirmed against the submitted information and for review.

48 The Applicant shall arrange for the required testing to be performed by a WRAS Recognised Laboratory. In the case of an Independent Test Laboratory, it is recommended that a legally binding contract is in place between the chosen test laboratory and the Applicant to permit the laboratory to submit all reported findings to WRAS on completion of the testing. This includes any failed tests. This reflects the recognised test laboratory obligations to WRAS. In the case of a First Party Test Laboratory the Applicant shall ensure that the laboratory submits all findings related to the application to WRAS, including any failed tests.

Testing:

49 Test results will only be accepted as part of an approval application if the testing has been performed by a Recognised Test Laboratory. The list of current Recognised Laboratories can be found on the WRAS website.

50 The tested product sample, on which the approval is based, shall have completed its assembly/manufacture no more than 12 months before the date of its receipt by the Test Facility unless specific requirements to the contrary are specified in the relevant testing standard.

51 When a non-metallic material or component requires BS 6920 testing as part of an application for Product Approval, the test samples should be no more than 12 months old on the date of receipt by the laboratory.

52 When the application includes a range of similar products, or products manufactured / assembled at more than one site, representative samples from the entire application must be tested. See the Sampling Matrix published on the WRAS website.

53 Where alternative materials / finishes are specified in the application, testing of the variants need only be undertaken where they could have an impact upon the conformity testing appropriate to that product.

Information:

54 It is essential that the Applicant provides all relevant information required by the Scheme before being presented for Approval.

55 It is important that the Applicant contact is able to provide and discuss technical details about the Product(s) with WRAS. During the application process the applicant must:

a. Contact the Scheme with any question relating to WRAS application forms and queries regarding the scope of approvals,

b. Be both familiar and fully compliant with the requirements of the Scheme as detailed in the WRAS Guidance documentation and terms and conditions of approval,

c. Submit complete, accurate and up to date applications using the appropriate application form. In addition, where appropriate, provide the supporting documentation and information listed in the WRAS Guidance,

d. Notify the WRAS Approvals Scheme (and the Test Laboratory where appropriate), immediately, of any changes relating to an application that may occur during the application process. Such changes may include, but not be limited to, the substitution of components or materials, a change to method of manufacture, modification of the intended use and/or the method of installation,

e. List all variations or models of products for which approval is being sought in the application,

f. List all the installation conditions to be covered by the scope of any Approval granted, for example by specifying which pipe materials the product is to be approved for use with and at what temperature and pressure ratings

g. Assist in the resolution of any queries and provide answers or additional information promptly, and recognise that delays in providing requested information will have an impact on the progress of the application. Delays may also result in a failure to satisfy the Scheme's acceptance criteria. In which case, the application will be deemed invalid and will have to be resubmitted as a new application unless previously agreed otherwise.

56 WRAS will reject applications which do not comply with the requirements when presented.

After Approval:

57 Following an approval being granted, the Approval Holder shall continue to adhere to these Scheme Requirements and the Standard Terms of Approval in relation to all Approved Products.

58 In order to maintain an Approval, the Approval Holder may be required to provide a self-declaration of continued compliance on an annual basis. If these requirements are not met sanctions may be applied to the Approval.

59 Throughout the period of the Approval, the Approval Holder commits to co-operate with any subsequent surveillance audit that WRAS may consider necessary to confirm the ongoing compliance of the approved product. The Approval Holder shall provide WRAS with all such relevant information (including samples and evidence of the purchase of products and materials such as goods receipts) as WRAS may require for that purpose.

60 Approval holders shall notify WRAS of any changes to contact details (including current email addresses), company details or business changes that relate to the Approved Product.

61 Approval Holders shall notify WRAS immediately of any changes relating to the Approved Product, its method of manufacture, intended use or method of installation which could affect the compliance of the Product or its Approval by WRAS.

62 Approval Holders shall ensure that no changes or modifications to the Approved Product, markings, assembly or range of products/fittings, including changes, substitutions or modification to the materials of construction, components or sub-assemblies are made without the Approval Holder first notifying WRAS. Modifications include but shall not be limited to design changes, changes in materials and/or suppliers of materials, changes to the site of manufacture and changes to marking.

63 Approval Holders shall provide WRAS with full details of any proposed modifications and if required, supply Samples for testing and reassessment. Failure to comply with this condition will immediately invalidate a previously granted Approval. WRAS also reserves the right to withdraw an Approval with immediate effect where WRAS considers that the modification may affect the validity of an existing Approval for any reason.

64 Approval Holders shall ensure that all products bearing the Certification Mark conform exactly with the Sample in respect of which WRAS Approval has been granted and that each product/unit manufactured by or on behalf of the Approval Holder which is to be attributed with WRAS Approval is capable of satisfying all of the same tests and other criteria applied to the Approved Sample.

65 It is the Approval Holder's responsibility to draw the attention of purchasers and installers to any installation requirements or notes that apply to their Approved Products, assemblies or range of products as a condition of Approval and to advise them that failure to install in accordance with these requirements will invalidate their approval and could result in contravention of the Regulations.

66 Approval Holders must ensure that individually Approved Products, components and materials incorporated or used in the construction of their Approved Product retain their Approval throughout the Approval Period. Where modifications are required WRAS must be informed and the modifications approved in accordance with clauses 62 and 63 above.

67 An Approval Holder may apply to extend the Approval up to nine months before the expiry date of the current approval. Where successful, the extended Approval Period will run for five years from the date of expiry of the existing approval, provided that this does not conflict with the guidelines for processing Applications published in the WRAS Guidance documents.

68 Approvals Holders will be required to comply with any relevant changes introduced by WRAS to the Approval Scheme. WRAS will specify a transition period where it considers this appropriate in order to facilitate the implementation of a change. WRAS will always publish details of any changes on the WRAS website. In addition, WRAS will attempt to make an assessment of those approval holders likely to be affected and will notify them of the change. This communication is reliant on the contact details being kept up to date by Approval Holders.

69 Approval holders may be asked to participate and assist WRAS (or independent agents appointed by WRAS) in quality control checks of the services provided to applicants for WRAS Products Approval.

70 When Approval Holders need to provide a copy of the WRAS Approvals Certificate to a third party, they must provide the Approval Letter in its entirety or direct the third party to the Directory.

Role of the Test Laboratory

When undertaking services relating to the WRAS Approvals Scheme

71 In order for laboratory results to be acceptable as part of a WRAS approval application, the laboratory must be accredited to BS EN ISO 17025:2017 by an International Laboratory Accreditation Corporation (ILAC) signatory Accreditation Body and be recognised by WRAS for the specific tests being undertaken. The Test Laboratory must be included on the WRAS List of Recognised Laboratories at the time of testing.

72 The Test Laboratory is required to sign a binding agreement with WRAS (WRAS.Cust-404), covering aspects including: eligibility and compliance with Scheme requirements, confidentiality, impartiality and WRAS Recognition. The Test Laboratory must agree to comply with all WRAS requirements included in these Scheme Requirements and the requirements for gaining WRAS Laboratory Recognition (WRAS-Cust.405 which can be obtained from the Website).

73 The Test Laboratory shall submit all reported findings to WRAS on completion of the testing, where testing is undertaken for the purpose of seeking a WRAS approval. This includes any failed tests. In the case of an Independent Test Laboratory, it is recommended that a legally binding contract is in place between such test laboratory and the Applicant to permit the laboratory to submit all reported findings to WRAS on completion of the testing. In the case of a First Party Test Laboratory the Applicant shall ensure that the laboratory submits all findings related to the application, including any failed tests.

74 The Test Laboratory shall report accurate and complete testing data for all tests required, in an impartial and non-discriminatory manner. All test data provided to WRAS must be included within the Laboratory's ISO 17025 schedule of accreditation, unless WRAS has approved the specific tests within the Recognised Laboratory status.

75 The Laboratory must participate in WRAS inspection and surveillance measures including inter-laboratory proficiency schemes.

76 If any Test Laboratory experiences operational difficulties or identifies any situation which could have an impact upon analytical quality control (e.g. changes in personnel or laboratory location, failure of equipment (including incubators) or testing failures), it must immediately notify WRAS in confidence. The Scheme is empowered to instruct the Test Laboratory on actions to be taken to ensure that its standards are achieved and maintained.

77 Advice to Clients: Recognised Laboratories shall ensure that all advice given to clients conforms to the current WRAS policies, including all aspects of confidentiality concerning information gained while testing products for other clients.

Laboratory Records

78 The laboratory shall maintain a file on each test submission intended for a WRAS Approval. This file shall contain the following information:

a. A completed laboratory's application form (or equivalent customer request documentation) and WRAS F2 Application form where provided by the client.
b. Copies of all relevant correspondence, including all correspondence with WRAS.
c. All relevant test data and a copy of the final report.
d. Register of samples (see below)

79 The [Test Laboratory] shall maintain a register of samples submitted for testing within the context of the Scheme. This register shall include the following information:

a. Date of receipt of the test samples
b. Laboratory reference number
c. Brief sample description
d. Name of submitting organisation
e. Tests undertaken
f. Date of issue of the test report
g. Overall pass/fail summary
h. Method of manufacture of test sample

Subcontracting

80 If a Test Laboratory is unable to undertake one or more of the tests required for a Approval, for whatever reason, arrangements shall be made for the test(s) to be undertaken by another Recognised Test Laboratory.

81 In accordance with ISO 17025 requirements, subsequent test reports which contain results provided by a subcontracted laboratory shall contain a statement indicating which test(s) were subcontracted and where the testing was performed. Confirmation that the client was in agreement with this change must have been obtained in line with the requirements of ISO 17025 section 7.1.1 c).

Reporting of Test Results

82 All test reports must be typed in English and comply with the requirements of section 7.8 of BS EN ISO/IEC 17025:2017.

83 Attention should be given to the layout and presentation of the test data and the clarity of the presentation of the information to assist the understanding by the reader.

84 The test report shall, wherever possible, include photographs of the actual product that was tested, including views of all items supplied, significant features of the product and the markings of identification.

85 Any amendments to test reports shall be made only in the form of a further document, which includes the Report Title: “Supplement / Amendment to test report XXXX” or equivalent wording.

A statement detailing the reason for the amendment/ re-issue should be included, along with details of the original report reference number and date of issue.

NOTE: Reissued reports containing the results of further or additional tests must always include all previous results.

86 When it is necessary to re-issue a complete test report, this shall be uniquely identified and shall contain a clear reference to the original test report it replaces.

87 It should be made clear on the report that WRAS is not responsible for the results reported by the laboratory.

Report Requirements

88 All test reports submitted to WRAS to support an Application for a product or material approval must include the following information:

a. A Title (e.g. Test Report)

b. The name and address of the test laboratory, and the location where the tests were carried out, if different from the address of the test laboratory (if recognition for testing at a customer premises has been granted)

c. Accreditation body and the Testing Laboratory's Accreditation number, where applicable

d. Unique identification of the test report (such as a sample number), and on each page an identification in order to ensure that the page is recognised as part of the report including page number and total number of pages with a clear identification of the end of the report

e. The name and address of the applicant

f. Date of receipt of the tested item

g. The results of each test, or series of tests shall be reported accurately, clearly, unambiguously and objectively, and in accordance with any specific instructions in the test. This includes the test specification measurement, units of measurement and results.

h. A description of the condition of, and unambiguous identification of the items tested (e.g. model, size, maximum operating pressure and temperature and material of construction where applicable. Where possible a photograph of the test item should be included

i. Name, function and signature of the person undertaking the test and authorising person.

89 For Mechanical test reports the following additional information must be included on the test report:

a. The WRAS section and title for the Item tested,

b. Unless the testing requirements have been agreed with WRAS prior to the commencement of the analysis, a sampling plan, including all models covered by the test report, must be included with the report. This should state the reason why specific models were not tested e.g. Tap assembly, same water pathway as model XXXX with different finish/operating member,

c. A table of the tests performed, including reference to the Test Standards or Test Code Sheet or Test Code Sheet clause used and clearly indicating PASS or FAIL decision (see paragraphs 94 to 1 below,

d. The body of the report shall include all the information necessary for interpretation of the tests performed e.g. Test Code Sheet number and clause, test specification, maximum operating pressure and temperature, test pressure, raise time and hold time (this list is not exhaustive),

e. If the testing was performed at a site visit, the report must include reference to all test equipment used and evidence of its calibration status.

90 For [M]aterial testing, the following additional information must be included on the test report:

a. Trade name and grade designation of the material used to make the test piece. This information is vital if the test report is going to have any value for approval of the material used. Ensure that all test reports contain this information.

b. Date of manufacture

c. Batch details

d. The method used to manufacture the test sample

e. The method used to prepare the sample where applicable

f. The conditions used to cure the sample where applicable

g. The site of manufacture

h. Inradius in the case of any elastomeric/TPEs sample(s)

i. Shore hardness where applicable

j. Description of sample.

91 Also, in addition to the reporting requirements set out in the appropriate section (s) of BS 6920 Parts 2 and 3, each material test report shall contain the following statements, as appropriate:

All Material Reports:

'The results specified in this report relate only to the sample(s) of this product submitted for testing. Any changes in the nature or source of ingredients and the process of manufacture or application could affect the suitability of this product for use in contact with wholesome water.' ***And:***

'We would draw to your attention that reports issued by the accredited test laboratories do not of themselves constitute approval by the Water Regulations Approvals Scheme or the test laboratory. Applicants will be formally notified of their WRAS approval number by the Scheme if their application has been successful.' **And:**

'Materials and products intended for use by a public water supply organisation in the preparation or conveyance of water may need to satisfy more comprehensive toxicological requirements as specified by the Drinking Water Inspectorate. These additional requirements are necessary to ensure Water Company usage conforms with Regulation 31 of the Water Supply (Water Quality) Regulations 2000/2014.'

All "Pass" Material Reports, either:

' is suitable for use with cold but not hot water' *or*

'..... is suitable for use with hot (up to [insert extraction temperature] °C) and cold water.'

All "failure" Material reports, either:

'..... is unsuitable for use with wholesome water' *or*

'..... is unsuitable for use with hot water'.

Requirements for Mechanical Test Laboratories:

Testing at Customer Sites

92 In some circumstances, and for a limited number of test types it may be more practical for testing to be undertaken away from the Test Laboratory at a customer site, for example visual dimensions and pressure testing of very large products.

93 However, for such testing to be accepted for Approval, each test that may be performed on-site must be listed on the Test Laboratory's ISO 17025 schedule of accreditation, and the Laboratory must have procedures to consider the following aspects:

a. The creation of specific Risk Assessments to identify the potential Health & Safety risks associated with each customer site and the suitability of the location where the testing will be undertaken. Assessment of whether there is suitable environmental conditions (adequate light, vibration, noise, contamination/cleanliness - as applicable) including for sample storage.

b. Processes to control the test equipment and instruments that will be used for measurements, including verification of calibration before and after testing.

c. Additional training and monitoring of technical staff performing test away from the Test Laboratory,

d. Security procedures to protect the integrity and confidentiality of test results if the test equipment is left unattended for any length of time (e.g. for 24-hour tests).

e. Additional supporting evidence of the product being tested and test set-up must be provided to WRAS as part of the report, e.g. photographs of the product, markings and arrangement of test equipment.

f. Mechanisms to protect test engineers against intimidation and subversion by the manufacturer while on their site. This should include the development of a process to covertly highlight if such behaviour has occurred.

g. Where appropriate, the provision of insurance and liability cover while operating on the customer's site.

Decision Rules for Reporting taking into Account Measurement Uncertainty

94 Laboratories shall have documented rules which detail how statements of conformity against the criteria specified in Standards will be made.

95 Laboratories shall consider all factors effecting the validity of their reported results and calculate the uncertainty of measurement (UoM) for each test.

96 Where the applicable Test Standard defines an acceptable tolerance range, the calculated uncertainty must fall within this specified tolerance.

97 Where tolerances are not specified in the relevant Standard, the laboratory calculated uncertainty should be less than 5% of the stated acceptance value, unless justified and accepted by WRAS. Measured test results falling outside the stated acceptance value, that might pass when taking the UoM into account shall be reported as a conditional result.

98 The calculated uncertainty values for each test reported to support WRAS applications shall be documented and provided to WRAS before laboratory recognition is granted. If at any point the test method is modified, any change in the UoM will be reported to WRAS.

99 Where a test result falls clearly within the acceptance criteria defined in the Test Standard, the UoM does not need to be reported in the test report and the report should be reported as a Pass. However, if this value could fall outside the acceptable criteria when the tests uncertainty of measurement is applied, this shall be indicated on the report, for example as an "conditional" result. In these cases, the UoM shall be reported alongside the result.

100 Any measured result that falls outside of the stated acceptable range shall be reported as a Failure. If the result is sufficiently close to the acceptable limit that when taking the laboratory measurement uncertainty into account, the result could potentially fall within the accepted range, this must be indicated on the report, for example as an "conditional-fail" and the UoM shall also be reported.

Testing of Pre-production / Prototype products

101 When a client commissions a Recognised Test Laboratory to perform testing of Pre-production prototype or research and development products, the laboratory must confirm with the client whether they wish the results to be used for a WRAS approval. Pre-production samples may utilise different production methods to the final production run and have different characteristics to the production version that will be offered to customers. This type of sample may be presented to WRAS for Approval in Principle but additional tests may be required on the Production Sample to be granted full Approval.

102 If the test is not intended to be used for a WRAS Approval, either at the time of testing or any time in the future, the client must confirm this with the laboratory and be aware that no results reported on the test sample will be accepted by WRAS. This needs to be documented on the test report.

103 The client must be made aware that any testing that may be used as part of an Application at any point, will be subject to the Approvals Scheme Requirements, and the test results will be reported directly to WRAS whatever the results of the testing.

Requirements for Material Test Laboratories:

104 Samples shall be prepared and tested in accordance with the methods detailed in BS 6920, Parts 1 to 3.

105 Recognised Test Laboratories shall not use any other test procedure for evaluating samples within the context of the Scheme unless specifically requested to do so by WRAS. Any agreed variations shall be documented in the final test report.

Materials Testing Experience

106 Material Test Laboratories will have to satisfy WRAS concerning the following aspects of testing to BS 6920:

a) Odour and flavour (O&F) of water – establish an Odour and flavour panel and demonstrate compliance with the requirements for panellists as set out in clause 8 of BS 6920- 2.2.1.

b) Appearance of water (colour & turbidity): as set out in BS 6920 - 2.3.

c) Growth of aquatic microorganisms: inoculum and test water - all the appropriate analytical data to demonstrate that both their inoculum and test waters comply with the requirements of clauses 7.2 and 7.3 of BS 6920-2.4. The test water should be monitored over a twelve-month period to identify any possible seasonal variation in quality.

d) Growth of aquatic microorganisms: dissolved oxygen determinations - the mean dissolved oxygen results obtained from the evaluation of six separate samples of paraffin wax and glass in accordance with BS 6920-2.4

e) Substances of concern (Cytotoxicity) testing - details of current tests performed involving the manipulation and culture of human or animal cell lines.

f) Extraction of metals analytical methods - details of the methods and equipment used to analyse for those metals detailed in Table 1 of Part 1 of BS 6920, together with the limits of detection achievable.

107 Before any test reports are accepted by the WRAS Approvals as the basis of an application for a WRAS Material Approval, the laboratory shall take part in an inter-laboratory proficiency trial

set by WRAS covering Odour and flavour testing (BS 6920-2.2.1). The results of this trial shall be submitted to the Scheme for consideration.

108 Following the successful completion of the initial laboratory inspection and proficiency trial the Scheme will grant a provisional recognition status for a period of one year. During this period the Scheme may request that the laboratory takes part in other inter-laboratory trials with other [Recognised Test Laboratories covering other aspects of BS 6920 testing and the Scheme's procedures.

Health and Safety Considerations

109 Where full Health & Safety data is not provided for a material to be tested, odour and flavour of water test should not be undertaken until satisfactory test results have been obtained in the cytotoxicity (BS 6920-2.5) and if appropriate on the basis of the nature of the test material, an extraction of metals BS 6920 test procedures (BS 6920-2.6).

110 Each Test Laboratory shall maintain a record of Health and Safety information relating to site applied product test samples. Where full formulation details and supporting Material Safety Data Sheets (MSDS) are not provided with the test samples the laboratory shall obtain:

a. Information to show whether any substances named in the current edition of the Health and Safety Executive publication EH40 - Occupational Exposure Limits are known to be, or might be, contained within the material/product.

b. Information as to whether the material/product is known to or suspected to contain known or suspected carcinogenic, mutagenic or teratogenic compounds or asbestos.

Establishment of New, and Relocation of Recognised Laboratories

111 If a new laboratory wishes to apply for Recognition, or any of the WRAS Recognised Materials Testing Laboratories relocates (other than to a different building within the same complex), the following procedures shall be followed:

Notification

112 The laboratory shall notify WRAS, in confidence, of the intention to apply for Recognition or the location of the new lab as soon as the new site is known. At least three months' notice should be given to ensure all recognition aspects can be addressed before the laboratory expects to be operational.

Inoculum Water

113 When identifying a new source of inoculum water, it shall be selected in accordance with Clause 7.2 of BS 6920-2.4.

114 Once one or more suitable sources have been identified, tests shall be undertaken to demonstrate that acceptable results are obtained, and where possible compare the new water with an existing source, testing a variety of materials. The new inoculum must be monitored to ensure it continues to meet the criteria specified in BS 6920, Section 2.4 throughout a period of 12 months (covering seasonal variations).

Test Water

115 The test water used must conform with Clause 7.3 of BS 6920-2.4 and the requirements of this clause shall be shown by analytical results obtained over a twelve-month period. This information may be available from the local water supplier.

Comparability Trials

116 Where possible, comparable results should be obtained between an existing recognised site and the proposed site, by testing a variety of materials in parallel. Where this is not possible for a relocating recognised laboratory, recognition of the laboratory shall be suspended from the time of the move until it has participated in an inter-laboratory trial organised by WRAS. During this period, suspended laboratories shall not issue reports in connection with the WRAS requirements.

Accreditation

117 The laboratory shall apply for accreditation for the BS 6920 tests at the new location by an appropriate Accreditation Body. Testing from the new site will not be accepted by WRAS until the accreditation has been granted, unless an inspection of the new laboratory has been successfully undertaken by WRAS inspectors, and any observations have been addressed. The laboratory shall notify WRAS when the accreditation at the new location has been granted by UKAS, or other ILAC member Accreditation Body.

Lapsed Time and Leachate Sequence

118 To maintain the requirements of both the Scheme and BS 6920 the following points shall apply to the preparation of test leachates/extracts in ALL tests with the exception of those required for the Extraction of Metals Test (BS 6920-2.6):

a) If a break in the extraction sequence occurs at any point, start the sequence again using fresh test samples.

b) Analysis of all extracts must start on the day they are collected (with the exception of the extracts for metals which are stabilised with acids). Do not store extracts for more than 8 hours before analysis. If this is not possible discard the extracts and then prepare a fresh sequence of extracts using fresh test samples.

Material Testing & Reporting

119 Testing shall be undertaken in accordance with the methods detailed in BS 6920, Parts 1 to 3. All test reports should follow the reporting requirements of the appropriate section of BS 6920 and must give the full test results for each test.

120 In specific circumstances Laboratories may base the testing requirements for new products on the WRAS guidance given in Table 1 of WRAS.Appr-310. If this guidance is used, the following statement shall be included in the report:

"Note for the Water Regulations Approvals Scheme (WRAS): the tests carried out on the samples of this product are based upon the table 1 'Testing requirements' and include the clause the testing has been performed against. The Scheme has not been consulted."

Assessment of Extracts

121 Apart from most Site Applied Products (see note b) assess and report the results obtained for the first leachate/extract in each of the following leaching tests:

- Odour and Flavour,
- Appearance,
- Cytotoxicity and
- Extraction of Metals.

If a failure is found using this first leachate, then assess the subsequent extracts, as appropriate, in accordance with the appropriate section of BS 6920.

Notes:

a) If the first leachate from a material has a detectable odour, for Health and Safety reasons the test laboratory should NOT assess it for flavour; the final (seventh) extract should normally be assessed for both Odour and Flavour.

b) In the case of most Site Applied Products (and in accordance with the guidance given in the Introduction to BS 6920-2.2.1 Odour and Flavour of Water – General method of test), flavour assessments should only be done on test extracts after a satisfactory result from the cytotoxicity test (BS 6920-2.5) has been obtained. Since it is often impractical to set up two sets of Site Applied Product test samples prepared and cured several days apart, it is therefore usually not possible to assess and report the odour and flavour of the first extract, but only the final (seventh) ones.

Estimation of Uncertainty of Measurement for Material Testing

122 The Drinking Water Inspectorate (DWI), who regulate water companies in England and Wales to ensure compliance with the Water Supply Regulations, identified that there was ambiguity regarding the specifics of how uncertainty of measurement could be applied in the testing of chemical determinands in Drinking Water.

123 To address the potential lack of comparability between laboratories, the Standing Committee of Analysts developed a published an authoritative guidance booklet to provide a consistent approach to calculation of uncertainty of measurement and limit of quantification across all laboratories in England and Wales that undertake analysis for the purposes of drinking water compliance.

124 WRAS have consequently adopted this guidance and recommend that this approach is used by all WRAS recognised Material testing Laboratories for determining the Uncertainty of Measurement of BS6920 testing. The Estimation of Uncertainty of Measurement for Chemical and Physico-chemical Determinands in Drinking Water, the so-called “Blue Book”, and accompanying workbooks can be downloaded from the Standing Committee of Analysts website: https://standingcommitteeofanalysts.co.uk/uncertainty-of-measurement/.

Re-Approval testing

125 In the majority of cases where an approved material or component has not altered in any way (including ingredients and their proportions, suppliers of raw ingredients and site and method of manufacture) the test requirements for its re-approval may be reduced. Re-approval testing must not be performed without written test requirements from WRAS, which must be requested before the original Approval lapses, unless a client requests that the full set of BS6920 tests are performed.

126 The test requirements issued by WRAS for reduced testing for a re-approval are valid for 12 months from the date of issue, provided the information submitted in the MA3 remains unchanged.

127 Test reports for re-approvals shall include reference to the existing/previous WRAS Material Approval number, and shall include the reference and date of the letter from the Scheme identifying the test requirements, together with a statement that the work included in the report was undertaken in accordance with this letter.

128 A copy of each Re-approval Test Report shall be sent directly by the laboratory to the Scheme, regardless of the test outcome.

129 The Test report must not include any statement or conclusion to indicate a decision regarding the on-going conformity or re-approval of the sample tested: All re-approval decisions are made by an authorised WRAS Decision Maker.

Notification of Variance and Causes for Concern

130 The Test Laboratory shall inform WRAS of any variance in the testing procedures (including leachate preparation), or note any cause for concern relating to a sample, by the inclusion of a final paragraph in the report titled: *"Note for the water regulations approvals scheme..."*

High Temperature Tests Non-Compliance

131 If a material/product fails in one or more of the high temperature tests (Part 3 of BS 6920) and then it is retested and passes using a lower temperature BOTH sets of results shall be included in the test report.

NOTE: Material Test Laboratories should also be familiar with the guidance described in:

- **WRAS.Appr-310: A guide for Manufacturers, Suppliers and Test Laboratories on the Application Requirements for WRAS Material Approval and**
- **WRAS.Appr-213 "Guidance on the Application Requirements for Non-metallic Materials and Components Within Products" (previously known as Appendix A to the Guidance on The Application Requirements for WRAS Product Approval).**

Test Laboratories Acting on Behalf of WRAS Applicants

132 Laboratories which are recognised by WRAS may be contacted by Applicants to advise and assist them in making an application for WRAS Approval. This would include performing the testing of the product and reporting the mechanical test results to WRAS on their behalf.

133 The role of the test laboratory when contracted to manage the application is to:

a. Check the details provided with the application (product description and photographs) with the actual product received to ensure that the information is correct and satisfies the Scheme's acceptance requirements as detailed in the WRAS Guidance documentation. Record this check on a summary sheet which will create the draft WRAS Approvals Directory Entry.

b. Where the supplied information fails to meet these requirements, to advise applicants what further action is necessary and ensure that any additional information is communicated to WRAS.

c. Where appropriate to identify or confirm and carry out mechanical performance testing in accordance with the Regulators' Specification, or other recognised equivalent standards and WRAS requirements necessary to satisfy the requirements of the Scheme.

d. To submit authorised technical reports to WRAS Approvals at the earliest opportunity after completion.

e. To notify WRAS of testing failures and where appropriate to provide applicants with appropriate information to resolve issues relating to their testing results.

f. Adhere to the requirements of the WRAS Test Laboratory Agreement when undertaking work on behalf of a WRAS approvals scheme applicant.

g. Cooperate with WRAS Approvals to ensure that good practice is adopted in processing applications.

Appendix A: WRAS Approvals Scheme Requirements and Code of Practice Declaration

The WRAS Approvals Schemes for water fittings and materials operate under the conditions detailed in the ISO/EN 17065 standard for the Conformity Assessments of Certification Bodies. This places great importance on the clarification of responsibilities within the scheme and as such requires that all external parties who contribute to the certification process sign a statement to commit themselves and their organisation to the following:

- Comply with the WRAS Product Approvals Scheme requirements as defined in the Scheme Requirements and Code of Practice (document WRAS-Cust-402)
- Comply with the WRAS Terms and Conditions (WRAS.Cust-401) or the Test Laboratory Agreement (WRAS.Cust-404), whichever agreement is applicable and the rules and policies defined therein, including those relating to the confidentiality of information and independence from commercial and other professional interests.
- Reveal any situation known to them that may present their organisation or WRAS with a conflict of interest.

Declaration:

As a [(delete as appropriate) Applicant, Approval Holder / Test Laboratory] to the WRAS Approvals scheme, I recognise the importance of these requirements in ensuring the proper conduct within the WRAS Products and Materials Approvals Schemes, and I agree to abide by its terms.

I confirm that I have reviewed and understood the above, and on behalf of the organisation stated below, will reveal to WRAS Management any situation which may affect the status of a WRAS Product or Material Approval or that may present WRAS with a conflict of interest in the delivering of WRAS Approval & certification schemes.

Signature _____

Organisation _____

Title/Position _____

Name _____

Date _____