Annex A

RESPONSE FORM

Proposals for amending Part G (Hygiene) of the Building Regulations and Approved Document G: Consultation

Respondent Details:	
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Is your response confidential? If so please explain why. (See disclaimer on page 9) **Yes** ☐ **No** ☒ **Comments:**	

Provision is made throughout this questionnaire for you to provide additional comments. If, however you wish to provide more detailed comments on any aspect of the consultation then please feel free to append additional materials and supplementary documents, clearly marked and cross referenced to the relevant questions, as necessary.

The Department of Communities and Local Government wishes to engage better with its stakeholders by automatically notifying you of changes to the regulations and approved documents and of consultations on building regulations issues. Because of the UK Data Protection Act 1998 we need your consent before we can do this. Please indicate your consent by ticking the consent box below.

I/We hereby consent to the recording, storage and processing of my/our personal information by the Department of Communities and Local Government, and any data processor you may use, for the purpose of enabling stakeholder engagement ☐

Organisation type (tick one box only)			
House or property developer	☐	Approved Inspector - Corporate - Individual	 ☐ ☐
Commercial Developers	☐	Local authority – other (please specify)	☐
Housing Association (Registered Social Landlords)	☐	Fire & Rescue Authority	☐
Property Management	☐	Other non-governmental organisation	☐
Builder – Main Contractor (commercial/volume housebuilder)	☐	Householder	☐
Builder – Small Builders (repairs/maintenance/extensions)	☐	Trade body or association	☐
Builder – Specialist Sub Contractor	☐	Research/academic organisation	☐
Manufacturer	☐	Professional body or institution	☒

Architects	☐	Testing bodies	☐
Civil/Structural Engineer	☐	Specific interest or lobby group	☐
Consultancy	☐	Journalist/media	☐
Individual in practice, trade or profession	☐	Insurer	☐
Local authority – Building Control	☐	Other (please specify):	☐
	☐		☐
	☐		☐
Geographical Location			
England	☐	Wales	☐
England and Wales	☐	Other (please specify)	☒

Cold Water Services

Q1. Requirement G1(1) would incorporate the requirements of existing legislation and standards on the provision of water and would provide a better understanding and visibility of requirements for water supplies in buildings. Some stakeholders have suggested that this requirement for the supply of water to all buildings would aid compliance and should not bring about additional costs. However, we would like to consider this further. Do you agree that this proposal would be beneficial and would not bring extra costs?

Yes: ☐ **No:** ☐ **Don't know:** ☐

Comments:

CIBSE believes that the proposal would be beneficial as it will clarify requirements outlined in other legislation but CIBSE is not clear that there would be no extra cost - we believe that there would be extra cost in order to comply with the water regulations.

Extra pipe work and valves will be needed in order to comply.

Consideration needs to be given to alternative hand cleansing solutions, eg biocide liquids/wipes, perhaps where costs of conventional water based approach would be particularly expensive.

Q2. Requirement G1(1) would clarify the provisions for the supply of a wholesome water supply to buildings (subject to the exemptions in the Building Regulations) where drinking water is drawn off, where food is prepared or where sanitary appliances are used for personal washing. Is it reasonable to expect all buildings in this context to be connected to a wholesome supply of water?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments: (e.g. are there any additional types of buildings that should be excluded?)

CIBSE is generally in agreement with the above but other methods of hygiene facilities could be applicable - for example hand cleansing solutions, eg biocide liquids/wipes for more remote structures such as National Park toilet facilities, remote mountain bothies, bunkhouses and "simple" structures.

Some laboratories and other specialist buildings need to have a supply with a type AA air gap. Usually these need to have potable water too. They also do not seem to be covered in the list of exempt buildings.

Q3. Requirement G1(1) specifies that wholesome water be provided to locations where drinking water is drawn off, where food is prepared and where sanitary appliances are used for washing (e.g. basins, baths, showers). Are there any other points in a building (including dwellings) where you would consider wholesome water is essential?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

Some laboratories and buildings with drink vending machines - schools for example. Also buildings where the water supply goes to rooms such as school chemistry labs and for use in emergency showers in laboratories.

Consideration also needs to be given to the on-site treatment of water which may be used for baths and showers (therefore non-wholesome water) and need to consider ice-making facilities and bidets.

Q4. Requirement G1(2) specifies those locations where a supply of water is considered essential, but where wholesome water is not necessarily needed. Is it safe and reasonable to allow the use of water from non-wholesome sources to be used in (i) dwellings and (ii) in other buildings for WCs, urinals, external taps and laundry (subject to the exclusions in the guidance in this document)?

Yes: ☐ **No:** ☐ **No opinion:** ☐

Comments: (e.g. are there any types of buildings where the use of non-wholesome water should not be allowed?)

(i) Dwellings - yes provided appropriate measures are in place to eliminate cross contamination and these are "DIY-proof".

Adequate safeguards would be essential in places where non-wholesome water can be used subject to a risk assessment undertaken by a person competent to do so.

(ii) Consideration should be given to excluding

* medical faciities where there is an increased risk of infection and patients may be susceptible to any potential cross-contamination. This exclusion is recommended not just because of the risk of infection but also because of public perception that there should not be non-wholesome water in this type of building.

* care homes for vulnerable people who may not be able to appreciate the difference beween wholesome and non-wholesome water.

* refugee/asylum seeker reception centres where there may be language and cultural issues.

Some kind of routine cleansing maintenance regime could be stipulated -i.e sterilisation, disinfecting, etc but this might be more costly than simply using wholesome water in the first place in hospitals.

Non-wholesome water should be restricted to supplying WCs, urinals and cooling equipment. For both dwellings and non-dwellings the pipe material used to convey this water should not be readily compatible with that of the wholesome water supply to prevent cross connections.

Not all use of wholesome water will be for sanitary appliances - other equipment may require wholesome water.

Non-wholesome supplies should also be clearly virtually identifiable and distinct from wholesome supply pipework.

Q5. It is expected that bringing together the various requirements to provide water to buildings will support better compliance. More consistent guidance would be beneficial to those seeking to comply and would assist consistent interpretation. Do you agree that it is helpful to include this guidance in the Approved Document? Are you satisfied with the guidance as drafted?

Yes: ☐ **No:** ☐ **Don't know:** ☐

Comments: (e.g. what else should the guidance cover?)

The guidance should be cross referenced to other parts of the relevant Building Regs (H, L,etc and Approved Documents) and also to comply with the Water Regulations.

Pressure and flowrate need to be taken into consideration - the designer will be responsible to ensure system pressures and flowrates. Also, there may be confusion over water supply company requirements on flowrates and pressure at the curtilage of a building.

There should be reference to measures which should be taken by the designer to minimise water quality deterioration.

Q6. Have we included sufficient detail in terms of the risk assessment and testing or specification of treatment systems that should be necessary to allow use of water from non-wholesome sources whilst protecting health within a building?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments:

The risk assessment criteria should be expanded to cover who should undertake and who should authorise the use of non potatble water service. Who is the adviser as to what is and is not acceptible? Are Building Control equipped to handle this?

There is scope for certifying the competence of advisers and a need to specify regular testing and inspection by a specialist non-wholsesome water supplier. It is thought the building inspectorate would not be sufficiently experienced for this inspection. A competence scheme would meet the need for qualified oversight on this point.

Note: is there provision for non-packaged non-wholesome water systems?

Note: water from some industrial processes, eg HVAC condensate, may be appropriate to use as non-wholesome water for some purposes in mixed use developments.

Q7. Is this guidance on appropriate sources and uses of non-wholesome water in dwellings sufficient?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments:

Not without incorporation of the comments that have been made above.

Further guidance is required for designers which could be provided through third party guidance, subject to appropriate transparency and peer review processes.

Water Efficiency

Q8. Is this guidance on appropriate sources and uses of non-wholesome water for buildings other than dwellings sufficient?

Yes: ☐ **No:** ☒

Comments: Because of answer given at Q 7. Further guidance on Risk Assessment is required as well as guidance on documentation for Operation and Maintenance.

Q9. Do you agree this requirement effectively implements the Government's policy for improving water efficiency in new homes, as signalled in its July 2007 statement? If no, please explain why not.

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

However there are a range of issues inherent in this proposal that will need to be addressed, including verification of appliance water usage, enforcement issues concerned with change of use, compilation of a library of approved appliances, possibly extending to point of sale control, review of product performance standards and independent certification of product performance.

Note: 125 litre/head/day should be referred to as a 'design target' and there should be clarity on how future uplifts in this design target will be dealt with.

Consideration should be given to developing minimum performance standards for all appliances and fittings.

We believe that the concept of a water hierarchy should be embedded - similar

to the levels in the Code for Sustainable Homes. CIBSE will provide information on the water hierarchy as a follow-up to this response.

Q10. A method of calculation for water use is provided in the Code for Sustainable Homes. We propose a simplified version of this calculation for use where dwellings will be supplied only with wholesome water. Do you agree that a simplified version of the calculation should be used in these situations?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Some indication of minimum and maximum operating pressures should be included.

The Code for Sustainable Homes, the Building Regulations and Approved Documents must always be consistent.

The use of water calculator defaults may allow poorly performing appliances to be specified as there is no imperative to test.

Q11. We propose that the water use calculation method provided in the Code for Sustainable Homes should be used where the design includes alternative water sources to demonstrate a greater level of water efficiency. Do you agree that the full calculation be used in these situations?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Again there will be issues concerned with ensuring that installed water re-use systems continue to operate satisfactorily and continue to deliver the water use offset included in any calculations accepted at the design or build approval stage.

Q12. Some of our stakeholders have expressed concern that the low flows in drains and sewers resulting from the proposed reductions in water use could lead to problems with blockages in drains and sewers. Do you agree that this may be an issue and if so do you have any substantial evidence of this?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

There may be issues where the quasi-steady flow from baths etc - useful to ensure waste transport - is replaced with an equal volume of water delivered in a number of short w.c. flushes that attenuate rapidly and do not have an equivalent waste carrying capacity. Solutions in new build would be to either reduce drain diameter or increase drain slope. There is ample site and laboratory evidence to support this view - eg McDougall J.A. and Swaffield J.A. "The influence of water conservation on drain sizing for building drainage systems" - BSER&T, 24, 4 (2003) pp229-243 (an electronic copy of this paper is attached as an appendix).

Reference should be made to Part H of the Building Regulations because the minimum drain size required in Part H should be not less than 100 mm

When there is less water, the system is less forgiving. Consideration should be given undertaking research to ensure efficiency wastewater transport. Gradient and as well as pipe diameters is important.

Hot Water Services

Q13. Is it reasonable to expect a supply of heated wholesome water to be provided in all personal washing facilities and to sinks used in association with food preparation and washing up?

Yes: ☐ **No:** ☒ **No opinion:** ☐

Comments:

Many current handwash basins do not have hot water available immediately (due to pipe runs, etc). Surely we should be able to delete the need for hot water from some ablution areas. The energy required for hot water generation can be significantly higher than for heating.

As part of CIBSE's Carbon 60 project, to reduce carbon emissions from our HQ building by 60% we have recommended that when toilets are refurbished just one hand washing sink has a localised water heater so that if hot water is required (for grease removal for engineers, cyclists etc using the facilities) it is available, but hand washing in cold water is just as effective and saves energy.

For food preparation areas there may be environmental health requirements for hot water for personal hand washing.

Where localised water heating is provided guidance should be given on sizing of heaters and in particular the electrical supply implications of electric water

heating.

Q14. Do you agree that it should now be a Requirement of the Building Regulations that all parts of hot water systems including cold water cisterns which could receive high temperature discharges from vented hot water storage systems should be able to withstand the effects of temperature and pressure that may occur either in normal use or in the event of such malfunctions as may reasonably be anticipated. ?.

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Q15. Do you agree that this requirement should apply to (a) new installations; (b) replacement of parts of installations including cisterns?

(a) new installations?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) replacements?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Q16. The amendment of G3(3) is proposed to address failures of the temperature control devices in vented hot water systems. Is it reasonable to bring control of vented systems into the Building Regulations?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

Q17. If you agree that vented systems should be brought into the building regulations, in which cases should this apply:

(a) new installations?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) when replacing a hot water boiler?
Yes: ☒ **No:** ☐ **No opinion:** ☐

(c) when replacing a hot water storage vessel (cylinder)?
Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Please note that for (b) hot water boilers, the cost benefit should be considered.

Consideration should be given to providing twin coil cylinder to allow easy upgrade when provided with a secondary heat source, such as a solar thermal system.

Q18. Do you agree that primary thermal storage systems containing more than 15 litres of water should be treated the same as other hot water storage systems under the proposed requirement G3:
(a) where the thermal store is used to heat domestic hot water?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) where the thermal store is only used for space heating?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

The issue of safety is the same as for other hot water storage vessels with respect to excess pressure and temperature. They have a similar risk of explosion to unvented hot water systems.

Also, appropriate safety devices for systems without replenishment of water should be considered.

Q19. Do you agree with the view that the requirement in G3(4) (G3(b) in the existing Regulations) should be removed?

Yes: ☐ **No:** ☒ **No opinion:** ☐

Comments:

The proposal to remove these requirements leaves the control of hot water safety issues open to misuse. There would be a potential additional burden on Building Control Bodies and risks to users.

Q20. Are you aware of other appropriate approaches to ensuring safety of all controlled hot water storage systems?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments:

Q21. Industry has advised that the proposed requirements and guidance for hot water systems outlined above are in line with current good practice in the industry. Their inclusion in the Approved Document will help raise awareness of such practice and ensure that clear guidance is available to all parts of the industry to support compliance. However they should result in no additional costs to industry. Do you agree with this assessment? Please provide details of which elements of the proposals you believe will add cost or benefits, and what you think the additional costs will be and who you think they will fall on.

Yes: ☐ **No:** ☒ **No opinion:** ☐

Comments:

We believe that there will be added costs and an additional burden on the Building Control Bodies.

There may be training requirements for BCBs and there may be scope for a Competent Persons scheme for trades installing these systems.

Q22. Do you consider that there would be additional costs to Building Control Bodies as a result of the introduction of any of the above proposals, and, if so are you able to provide us with information on these?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Whenever a new regulation is introduced that effectively requires a new monitoring role there will inevitably be an increased cost. This will have to be borne by Building Control and will include both extra staffing and specialist training in 'water' based regulations and enforcement.

It has been demonstrated that BCBs are struggling with Part L compliance, so this would stretch their capabilities even further, possibly resulting in a poorer service, as well as being more costly. No extra funding has, to CIBSE's knowledge, been forthcoming for the training required by BCBs for Part L. Unlike Part L, non-compliance with the requirements of Part G could result in immediate and serious harm to

individuals and the necessary training to ensure compliance is therefore is essential for personal well-being and safety.

The existing Water Industry Inspectorate could be used for monitoring or the responsibility could be shifted to a Competent Persons scheme (or schemes).

Q23. We would like to introduce controls to limit water temperatures at hot water outlets; however the current cost benefit analysis does not support a regulatory change (costs are currently assessed at about three times the benefits). Are you able to provide more information which we could use in further analysis of the costs and benefits? Please provide any additional information you can.

Yes: ☐ **No:** ☐ **No opinion:** ☐

Comments:

We cannot provide specific information. However thermostatic mixer valves are constantly being developed and costs will be reduced in time. Most domestic mixer tap appliances nowadays limit the maximum temperature through the tap. Their real problem is ensuring adequate fail safe measure should the cold water supply fail, allowing full temperature hot water to flow.

Another option is to investigate the development of chemical water treatment and dosing methods allowing the hot water supply to be stored at a lower temperature. However the issue of legionella must also be considered (how does dosing and treatment work on small systems and what are the maintenance implications).

Q24. If further evidence is forthcoming which reduces the gap between costs and benefits in the initial analysis, would you wish to see a provision which controlled the temperature at hot water outlets?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

The cost benefit analysis inevitably depends on the value placed on the injury - a variable concept but we would wish to see these controls introduced asap.

Weighing up energy consumption and associated costs is inevitably subjective against personal injury and costs. Injury prevention has to be better than treating a scalded person's injury.

Q25. If you support the principle of introducing temperature control on hot water outlets in dwellings, subject to the preparation of a supporting Impact Assessment, which sanitary appliances would you like to see included?

(a) baths?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) showers?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(c) washbasins?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(d) bidets?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(e) kitchen sinks?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

All these appliances can be the source of hazard in special circumstances or to sections of the population - based on age or infirmity. Exceptions may be needed for kitchen sinks (primarily commercial but also for bed & breakfasts, guest houses) etc where full temperature hot water may be required to wash off grease etc.

Q26. If temperature controls were introduced, subject to the preparation of a supporting Impact Assessment, do you agree that all controlled outlets should be limited to 48°C? If No please state which outlets should be controlled to different temperatures and give details of the proposed temperature and why?

Yes: ☐ **No:** ☐ **No opinion:** ☐

Comments:

Opinion is divided amongst CIBSE respondents. Hot water at a higher temperature may be required for kitchen sinks where hotter water is needed for grease removal and other areas where higher temperature

water is essential to meet a certain standard of cleanliness.

However scalding can occur at temperatures below 48 degree C and it is therefore an argument that kitchen sinks should be excluded.

Q27. If temperature controls were introduced, subject to the preparation of a supporting Impact Assessment, do you think that the same level of protection should be applied in buildings other than dwellings, and if so, which sanitary appliances would you like to see included?
(a) baths?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) showers?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(c) washbasins?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(d) bidets?

Yes: ☒ **No:** ☐ **No opinion:** ☐

(e) kitchen sinks?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

there may be certain circumstances where higher temperature water is needed for certain standards of cleanliness - such as laundries and larger catering establishments, B&Bs, guesthouses.

There may also be good reason for excluding kitchen sinks which may require higher water temperature for cleaning purposes, such as grease cutting. See Q 26.

Q28. If temperature controls were introduced, subject to the preparation of a supporting Impact Assessment, to which types of work would you like to see regulations applied?
(a) the erection or extension of a dwelling or the creation of a dwelling by material change of use?
Yes: ☒ **No:** ☐ **No opinion:** ☐
(b) the erection or extension of a building with rooms for residential purposes (e.g. residential homes, hostels, hotels) or the creation of

rooms for residential purposes by material change of use?
Yes: ☒ No: ☐ No opinion: ☐
(c) the erection or extension of any new building?
Yes: ☒ No: ☐ No opinion: ☐
(d) the replacement of a sanitary appliance and/or associated taps which are controlled fittings in any building?
Yes: ☒ No: ☐ No opinion: ☐
(e) the replacement of a sanitary appliance and/or associated taps which are controlled fittings in a dwelling?
Yes: ☒ No: ☐ No opinion: ☐
(f) the replacement of a sanitary appliance and/or associated taps which are controlled fittings in a building with rooms for residential purposes?
Yes: ☒ No: ☐ No opinion: ☐
Comments:
If d) is any builidng then e) and f) are covered. CIBSE would argue for d) above to apply to all buildings, not just those covered in e) and f).

To keep the rule simple yet effective, it should be applied across the board. Exceptions should be clearly identified to ensure no confusion is created. The RIA needs to address all the above

Q29. For vented hot water storage systems, we have proposed that systems incorporating one safety device in addition to the vent pipe and any thermostat would meet the requirements of G3(3). Do you agree that this is adequate to ensure the safety of people in the building?

Yes: ☒ No: ☐ No opinion: ☐

Comments:

Q30. For vented hot water storage systems, we have proposed that systems with a boiler overheat control would meet the requirement G3(3). Do you agree?

Yes: ☐ No: ☐ Don't know: ☐

Comments:

There are a number of complex issues associated with this question which make both 'yes' and 'no' inappropriate as answers.

If the vent became blocked there would be no safety provision other than the boiler stat. A safety valve should also be provided and this would need to have a non self-resetting operation.

Q31. Should the provision for third party approval in paragraphs 3.18 be retained? Please provide reasons

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

This protects against use of un-verifiable equipment. Other guidance may be available but the listed items cover a majority of the relevant statutory requirements.

Systems are available with different safety controls for countries other than the UK. Third party approval strongly signals the UK requirements to manufacturers, installers and specifiers.

Q32. Paragraphs 3.19 and 3.20 contain provisions on marking of unvented hot water storage systems that were previously included in BS7206 but not in the replacement standard BS EN 12897. Do you agree that the Approved Document should include provisions for marking of unvented hot water storage systems with:
a) the information listed in 3.19? If no please state which items should not be included and give your reasons?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments:

Reference to the BS EN should be adequate.

Note: In the Performance Section the safety device should be specified as 'independently operated'. This is a reliability engineering consideration.

b) the information listed in 3.20? If no please state which items should not be included and give your reasons?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

Q33. Do you agree that unvented hot water storage systems over 45kW, but less than 500 litres in capacity are normally supplied by a manufacturer as packages or units?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

It would provide better safety control

Q34. If so should the provision for third party approval in paragraphs 3.18 be extended to cover these systems? Please provide reasons for your answer.

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

To keep the rule simple and effective, as our response to Q 28 states (to keep the rule simple yet effective, it should be applied across the board. Exceptions should be clearly identified to ensure no confusion is created. The RIA needs to address all the above).

Similar treatment is required for all other above 15 litre unvented hot water systems.

Q35. If the guidance permits the use of temperature resistant plastic pipes for the discharge pipe D2, will it be possible to adequately distinguish the pipe material from other plastic pipes in order to ensure that the correct grade of pipe is used? If Yes, please explain how this might be achieved.

Yes: ☐ **No:** ☐ **Don't know:** ☐

Comments:

This is an issue that needs significant further consideration before a conclusion is reached.

White plastic pipes in building services are predominantly known to be domestic waste or drain pipes. Colour coding is an option but is it sufficient to ensure that the installation is connected properly? if so, then there is no reason why it cannot be used.

The smaller bore pipework (compared with standard domestic waste pipes) which may be used as a safety discharge pipe would also have to indicate that it needs to be terminated in a safe and proper manner'.

There is however an argument that plastic pipes should not be used in any circumstance because of the difficulty in determining the correct

gauge. It should perhaps not be left to individuals to understand colour coding. This is especially pertinent in a time of skills shortages when migrant labour from across an expanded Europe is increasingly used in the UK. There is probably no substitute for clearly marked products suported by clear guidance.

Use of metal pipes will eliminate the problem of temperature resistent plastic - there is temperature resistent and non-temperature resistant plastic - do site workers and specifiers understand the difference between them? The difference in cost between plastic and metal is not significant because of the small amount of pipe work involved.

Q36. It is proposed to permit the termination of a discharge pipe in a soil stack provided the soil stack is made from a suitably temperature resistant material. Do you believe it will be possible to ensure that a soil stack is made from a temperature resistant material particularly where the soil stack is in a service duct? If Yes, please explain how this might be achieved.

Yes: ☐ **No:** ☒ **No opinion:** ☐

Comments:

This proposal should not be adopted under any circumstances. A discharge pipe should go direct to a trapped gully. If you collect into a soil stack the drain gasses could vent into the building. The issue is not one of temperature but one of preventing drain gasses venting back into the building.

If there were any circumstances where a soil stack were to be acceptable positive confirmation of wastewater materials should be a pre-requisite. This is another case where verification would be necessary and would increase costs. Direct discharge to a trapped gully would be preferred.

WCs and Associated Facilities

Q37. Requirement G4 (4) would apply to other buildings such as institutions, hotels etc which may be workplaces and covered by current requirements. Do you agree that the Building Regulations the right place

for this Requirement and that this change would not impose additional costs or other burdens?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Q38. Are the changes to the wording of the guidance and the inclusion of diagrams 2 and 3 helpful in clarifying how WCs and associated hand washing facilities are provided in relation to kitchens in dwellings? If no, what alternative changes would you like to see?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Note: The WC currently depicted in the document looks like a siphon flush WC and these are less common now. Perhaps a more up to date image could be used.

Q39. References to other sources of guidance and standards on the scale of provision of WCs, urinals and hand washing facilities in buildings other than dwellings has been added to aid in the design of buildings. Do you agree it is appropriate and helpful to include this in Approved Document G?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

The recent consultation on the Future of Building Control proposed to establish criteria for references to third party documents. The answer that CIBSE gave is relevant here. Professional and learned society documents are already subject to clear criteria for their production, including transparency, peer review and, in some cases, legal scrutiny. Similar levels of review and scrutiny should be applied to all third party guidance.

There is some indication that third party documents cited in Guidance may need to be notified to the EU under the 98/34 Directive procedures. If that is to be the case then there will be a clear need to liaise with providers in a timely fashion, and to agree timescales for the development or amendment of third party documents which are realistic and which allow for the processes of peer review and scrutiny, described above.

The issue of free availability (except for BS ENs) needs to be considered carefully. There are costs associated with the maintenance of BSI Standards and in the same way, third party documents produced by

others also incur costs, which are currently defrayed by charging for the information. It is possible that third party providers will not wish to make their material freely available, leaving the Department to fill the gap.

A possible solution is that sufficient material from the third party document to give potential users a clear idea of what the guidance covers should be made freely available, with printed copies still being sold. However, this approach needs careful handling, and if the business case for charging for standards is recognised, then so should that for other sources of guidance.

Will there be links to the web versions of thirs party documents from the web versions of the ADs (or Technical Guidance) which refer to the third party guidance?

More specifically, BS 6465 Part 1: 2006 needs to be reviewed with respect to the scale of provision of sanitary appliances for offices. This review is currently underway by the BS panel involved and the work needs to be coordinated with the Part G publication timetable.

Q40. Is it appropriate to include guidance on the performance of chemical and composting toilets in the Approved Document G?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Bathrooms

Q41. The application of this Requirement is currently limited to dwellings. Do you consider that there is a need for a new requirement for the provision of adequate bathing facilities in buildings containing rooms for residential purposes e.g. hostels, hotels etc..?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Food Preparation Areas

Q42. The introduction of a new Requirement has been proposed to align Part G with current practice. Stakeholders advise us that this will impose no new burdens. Do you agree that it would be beneficial to include this new requirement, and that it will introduce no additional cost or other burdens?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

Sanitary Appliances

Q43. The Requirement to install appliances to allow adequate cleaning is currently limited to WCs, urinals and washbasins. Is it reasonable to extend this to include other appliances (and which ones)?

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments:

We cannot think of a sanitary appliance that would not require adequate cleaning.

Bidets should be included and urinal traps should also be easily removable.

Regulations should be worded so that they apply to sanitary appliances developed in the future as the result of research and development.

Q44. The Requirement to design appliances through the correct choice of profile and materials to allow adequate cleaning is currently limited to WCs, urinals and washbasins. Some stakeholders have suggested this should be extended to include baths, shower trays, sinks, bidets, taps and shower hoses/heads. Do you agree this is necessary?

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments:

Q45. Some stakeholders have suggested that there is no need for a Requirement on cleanability of baths, shower trays and cubicles, sinks, bidets, taps and shower hoses/heads. Do you agree?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments: All appliances have to be cleaned fairly regularly. The possibility of cross infection is sufficent to justify the answers given to Q43-45

Q46. If the Requirement (on cleanability), and the guidance, was either removed or was extended to include other sanitary appliances, would

this have implications for products currently on the market? Please specify.

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments: Greater care would have to be used in the design phase with regard to access to ensure that surfaces were reachable.

A product's cleanability is usually a good selling point on a commercial basis, as well as reducing the risks of any claims for injury caused by difficult cleaning.

Other architectural surfaces should also be considered.

Q47. **It has been suggested that we might consider new guidance for slip-resistance on shower and bath surfaces. This has not yet been included and your views are sought. Do you think guidance on this in Approved Document G would be appropriate?**

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments: There is ample evidence that slipping is a major cause of injury and this can be life threatening to certain sections of the population - eg elderly and infirm leading to hospitalisation costs etc. CIBSE agrees that 'Slip resistant' is the correct term to use (as opposed to 'non-slip' which is not used in the sector because of the potential for legal problems if someone does actually slip). CIBSE however believes that there would be a limit on how effective guidance on slip-resistance would be although we do agree that an attempt should be made to include some guidance.

A robust test is required for sanitaryware slip-resistance but it is questionable as to whether it will be achievable – this may be something that has to apply Europe-wide and is therefore best defined at European level. It should be noted that slip resistance is an enormously difficult and controversial issue - CEN and ISO have been working on it for 20 years or more with limited progress. The European Commission deleted 'slip' from Mandate M/110 because no Member State has regulatory requirements - and they were aware of all the difficulties mentioned in this answer.

The flooring sector has done a lot of work in the area but there are still arguments about what device to use to assess 'slip resistance' and the parameters to be measured. Most if not all of this work is focused upon the shod foot. It is a huge leap to then consider bare feet with water, soap and shower gels present which hugely increase the likelihood of slipping regardless of the surface. The skin on the heel of an elderly foot will be very different from that of younger people.

Slip resistant surfaces are likely to conflict with cleanability requirements and even comfort/safety issues. Roughened surfaces can be difficult to clean and they can be uncomfortable or even overly abrasive to the softened skin of children when they are playing at bath-time. There may also be a cost increase implication for manufacturing.

To reinforce any guidance on reducing slip, hand grips should be a requirement to be fitted to all baths, showers and wet rooms - cross reference with Part M and the Joseph Rowntree Lifetime Homes initiative.

Q48. If there is a place for this guidance, which surfaces and products might it cover?

(a) shower trays

Yes: ☒ **No:** ☐ **No opinion:** ☐

(b) baths

Yes: ☒ **No:** ☐ **No opinion:** ☐

(c) wet rooms

Yes: ☒ **No:** ☐ **No opinion:** ☐

(d) other products/surfaces

Yes: ☒ **No:** ☐ **Don't know:** ☐

Comments: Possible application to squat toilets

Impact Assessment

Q49. There are a number of proposed changes to Approved Document G. Those listed under Option 2 of the Impact Assessment are considered not to be a change in current practice and reflect guidance in standards and the Water Regulations Guide. Do you agree with stakeholder views that these changes would not lead to additional costs, and are you able to provide additional information on this?

Yes: ☐ **No:** ☒ **Don't know:** ☐

Comments: We are unable to provide additional information but would expect the changes proposed to introduce extra costs.

Q50. The benefits and costs of introducing temperature control to sanitary appliances have been presented in this Impact Assessment. Do you think these benefits and costs are reasonably represented? If you

are able to provide additional information for use in the modelling, please note this in the comments.

Yes: ☒ **No:** ☐ **No opinion:** ☐

Comments: Despite not being able to add any definitive extra costs we would support the introduction of temperature control. However, further work may be required.

Q51. Introducing in-line blending valves to new build properties, extensions and changes of use impose significant costs which greatly exceed the financial benefits of this measure. Whilst we would like to support the introduction of these to control the temperature on bath taps in order to start addressing the most sever and fatal injuries from hot tap water associated with baths, we cannot justify a proposal to do this. Are you able to provide us with additional information to inform our assessment of the costs and benefits of these?

Yes: ☐ **No:** ☒

Comments: Domestic sized thermostatic mixing valves are relatively expensive, and foreign made units are readily available, however, their effectiveness and reliability would have to be checked out. We believe that bath mixer taps would be an acceptible answer, without excessive additional costs.

Perhaps further research and development should be encouraged to seek a more affordable safe mixer valve, possibly by announcing that regulation is to be phased in - this would encourage manufacturers to act now in order to be competitive and allow a lead in period.

Other Comments: (e.g. Do you find the guidance helpful?)

Overall the Part G guidance is helpful. The force of Building Regulations ensures that approriate systems shall be designed and installed. This will result in fewer casualty cases being caused by hot water burns etc.

The changes proposed will have implications for verification and enforcement and will therefore inevitably raise costs but should be supported.

There should be some coordination with discussions about compliance with Part L of the Building Regulations.

Although Building Regulations apply at the point at which building work has been completed, consideration needs to be given to Operation and Maintenance issues associated with non-wholesome water systems.

The Water Hierarchy should be embedded in the water efficiency section. See CIBSE guidance on this topic.

Further research is recommended on the energy and carbon implications of the use of non-wholesome water systems.

Should standards be referenced as a dated document or should their future revised version be allowed (undated)? The need to submit regulations under 98/34 Directive may require dated references.

Solar water heating - all system materials need to be rated at the appropriate pressure and temperature (not just valves).

Consideration should be given to future proofing buildings, for example

(i) twin coils for hot water cylinders to enable future connection of solar thermal heat input or GSHP.

(ii) design of WC water supply pipework in order to allow easy upgrade of non-wholesome water supply.

Safety devices (temperature and pressure valve) discharge - should remain safe and visible. If not readily visible, then discharge should be alarmed.

The Legionella risk of hot water temperature control devices needs to be fully considered. Thermal disinfection of valves and deadlegs should be considered.