

20th November 2020

Water UK
3rd Floor, 36 Broadway
Westminster
London SW1H 0BH

Dear Mr Olowe,

Subject: Proposed correction to Appendix C Design and Construction Guidance Approved

The minutes of the meeting of the Independent Sewerage Advisory Panel on 22nd September were published this week on the Water UK website. There are several points which we need to bring to the attention of the panel.

1. Risk to customer and public safety – for many years there has been confusion over the provisions needed to protect members of the public by preventing unauthorised access.

In our letter to the panel in January 2020 and in the change proposal form, we tried to explain this, but the minutes of the meeting indicate that the measures required to prevent accidents are still not understood.

In summary – to prevent accidents, unauthorised access needs to be avoided. This is achieved by restricting the clear opening size for any chamber where a person cannot lift themselves out should they fall – i.e. any chamber with an invert depth greater than 1m (see detail below). Reducing the maximum allowed installation depth from 3m to 2m will not improve the health and safety aspect of the installation as a person falling into a chamber up to 2m would still not be able to climb out.

To provide a clear explanation and single point of reference, BSI committee B/505/22 (at the time, Chair Don Ridgers, Technical Secretary Nick Orman) prepared a national Annex to BS EN 752: 2017. BS EN 752 is called up by the DCG, B5.2.

BS EN 752: 2017 Clause NA.6.4.3
Clear opening size at surface

To maximize the safety of the public and personnel working on the drain / sewer, the dimensions of openings to access points should be chosen to reflect the intended purpose.

- a) Rodding points
- b) Access fittings
- c) Inspection chambers - chambers are designed for working at ground level, the clear opening (cover size) is a minimum dimension sufficient to provide the introduction of equipment.
 - i) The minimum clear opening size should be the same as the nominal internal dimensions of the chamber.
 - ii) For inspection chambers > 1m depth (from cover to invert of pipe), safe egress cannot be achieved. To prevent unauthorized access, a recommended maximum clear opening size is 300 mm x 300 mm rectangular (350mm circular).
- d) Manholes

This National Annex guidance is consistent with The Building Regulations (Approved Document H), which recommends that for inspection chambers deeper than 1.2m access is restricted to maximum 350mm circular cover. Note 3 to Table 11 explains that the purpose of this - "The size is restricted for health and safety reasons to deter entry".

NHBC Guidance is consistent with The Building Regulations (Approved Document H).

There is no maximum depth of chambers under Approved Document H. BPF Pipes Group members supply chambers for use under the Building Regulations up to 4m deep.

It is very disappointing that despite the work that was undertaken by the BSI committee to clearly and correctly explain the safety provisions (and by the BPF Pipes Group to promote this best practice), sewerage companies are still reporting here health and safety issues resulting from the incorrect application of the provisions.

2. Difficulties of access for maintenance and CCTV – practical research projects and site trials were undertaken before introduction of inspection chambers to Sewers for Adoption to determine their suitability for use with operational equipment, so it should not necessary to rely on anecdotal feedback.

I am sure WRc will be providing evidence of this suitability through the work done on non-man entry access systems for water companies and, in parallel, for manufacturers in 1999.

In addition to that, site trials were undertaken by manufacturers for both water companies and local authorities. We have been able to supply the 2002 video of work done in the Severn Trent area, but similar studies were also carried out elsewhere should you need further information and confirmation by the company / authority of the acceptability of the solution.

Since the 1999 / 2002 trials, inspection and maintenance equipment has generally reduced in size, so these studies provide conservative results.

3. Numbers of 3m chambers being offered to (SCs) for adoptions is very low – members of the panel may not be aware of the many units sold for adoption across sewerage company areas, possibly because plastic inspection chambers are supplied in sections and with adjustable risers. On sloping sites, sewerage systems will commonly contain chambers up to 3m deep and for private systems this may be deeper still. By excluding chambers between 2m and 3m depth based on incorrect interpretation of the safety provisions and anecdotal feedback on suitability of chambers for use with operational equipment, sewerage companies will be committing to unnecessary increased costs as chambers will need to be replaced by manholes.

4. The issue of depth of the inspection chamber had been considered in the consultation process

The BPF Pipes Group supported WRc and the drafting team throughout preparation of the drafts (from SFA8 pre-implementation onwards). We checked drafts, prepared diagrams, updated references and so on.

There were no changes to chamber depth until the final consultation draft (25/3/19). Changes between the drafts on 14/2/19 and 25/3/19 were not indicated and the changes were included only in the embedded figures (Figures B.18 – B.21 and Figure 1) meaning that even a comparison of the two pdf files would not show changes. Only 7 days were allowed between making the final consultation draft available and sending the final document to OFWAT.

Once again, we have attempted to explain the safety provisions and present factual evidence. We trust that due consideration will be given to the detail.

Yours sincerely,



Julia Trew
Standards and Technical Manager – BPF Pipes Group

