

Question:

Is Air Void testing of HRA as stated within the SROH only applicable to the conventional family of HRA's as stated within the SROH on page 97 which says as follows:

"A2.1.1 Surface Course Mixtures

The following HRA surface course mixture options are permitted.....

(3) Footways, Footpaths and Cycle Tracks

HRA surface course mixture shall be HRA 15/10F surf 100/150 rec or, HRA 15/10F surf 70/100 rec or HRA 15/10F surf 40/60 rec...."

If we are required to use a "sand carpet" type of fine aggregate material (as is permitted within S8.3.3. and/or S8.3.4 of the SROH) then ,according to the information on the materials collection tickets, the material we are using is titled as either HRA 0/2F for 2mm aggregate, or, if we requested 4mm aggregate, it would then become HRA0/4F

Neither of the above fit anywhere within the SROH footway definition of a HRA which leads me to believe that sand carpet, although a form of HRA, falls under the "any other bituminous materials within the specification" which, as per the Air Void table on page 77 means that there is guidance within the SROH on compaction but no air void limits apply.

Can you confirm that the fine asphalt footway reinstatement material commonly known as "sand carpet" is actually a material that can have the relevant air void test applied to it?

Working Party Response:

In all SROH Editions to date, Mastic Asphalt (sometimes referred to as Sand Carpet) specifically used as a footway Surface Course has been considered to be used very infrequently. The majority of deliberations by the HAUC (UK) SROH Working Party (the "SROH WP") have been limited to:

- ensuring Highway Authorities (HAs) can expect these materials to be reinstated under the Code of Practice [Sections S8.3.4(1) and S8.3.4(2) refer], and
- providing flexibility to Undertakers in order for them to group very low numbers of reinstatements in these materials, in order to make the cost of reinstatement reasonably economic.

Using the additional paragraphs provided in Section S0 of the SROH 3rd Edition (England) (the "SROH"), the SROH WP considers that it has not set a specific Air Void (AV) limit for Mastic Asphalt, rather it falls under the limits provided in Table S10.1 ["Any other

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bituminous materials within the Specification”]. For clarity, S0 provides that Undertakers determine Surface Course material selection (for footways) as follows:

1. Figure A7.1 sets out required reinstatement materials and layer thicknesses for footways.
2. Table A2.5 in Section A2.9 (Key to Materials) cross references the materials set out in Figures A3 to A7 inclusive, directing users to Appendix A2 for preferred and/or permissible materials.

[Note that Section A2.9(2) advises that some proprietary materials, such as “*flowable mastic asphalts*” are not included in Table A2.5. Accordingly, these materials are not referenced in the major sections relating to HRAs, SMAs and ACs in the earlier Sections of Appendix A2]

3. In respect of HRAs, Section A2.1.1(3) states, and thereby limits the permitted HRA materials under the SROH.
4. Other reinstatement matters for footways, including exceptions (and/or limitations), are set out in Section S8:

- a. S8.3.3 is specific to existing Surface Courses deemed to be in the category of Asphalt Concretes, so is not relevant to Mastic Asphalt, which is otherwise detailed in S8.3.4;

[Note that in Section A2.3.2(b), which is specific to Asphalt Concretes and cross references with S8.3.3, makes reference to the superseded BS4987 standard when assessing existing Surface Course materials considered to be Asphalt Concretes]

- b. S8.3.4 essentially requires the Undertaker to reinstate an existing Mastic Asphalt Surface Course with Mastic Asphalt Surface Course reinstatement material.

In relation to Air Voids, Section S10.2.3(2) introduces Table S10.1 and is specific in its reference to bituminous materials in Appendix A2. In respect of HRA Surface Courses, the permitted Air Voids limits set out in Table S10.1 relate to those HRA materials permitted, and set out in Appendix A2, specifically Section A2.1. Therefore any other HRA material sits outside the Air Voids limits in Table S10.1. The “*Any other bituminous materials within the Specification*” entry in Table 10.1, effectively reinforces this logic.