

Appendix A9

Appendix A9 of the SROH allows for Alternative Reinstatement Materials (ARM's) to be used but they must have been trialled as described in A9. Trials (a 2 year period) are expected to be promoted (usually) by an Undertaker and the trial process and details agreed with a particular Highway Authority, with reference to App A9, and most commonly involve the mixing of a proprietary additive with excavated material to make unsuitable material suitable for re-use or to enhance the performance of already suitable material. During the trial, particular properties such as bearing capacity, compressive strength, frost susceptibility, degree of water sensitivity etc need to be demonstrated and upon successful completion of the trial, and depending on the test results provided, it would be categorised as being a particular grade of ARM - either Structural Material for Reinstatement – SMR or Stabilised Material for Fill (SMF) class A, B, C or D and then could be used wherever that material is permitted; the Authority would sign to this effect. Records must also show the details of what the trial covered eg the nature of the treated material, proportion of additive, methods of mixing and compaction, classes of reinstatement etc. It's not expected that the trial process should have to be repeated in every Authority area. The Organisation(s) that promoted the trial, and were granted approval, should approach any other Authority where they want to use the process, produce the trial data and ask permission to carry on, Authorities are only allowed to refuse on engineering grounds (which they may genuinely have) and they must state the grounds for refusal eg trial sites didn't include the use of clay, chalk etc. Alternatively approval could be agreed generally by a Regional HAUC group.

Trial Process

Promoter(s) of the trial approach an Authority to request permission to carry out a trial. Promoters are likely to be Undertakers / Contractors but manufacturers of proprietary products such as hydraulic binders or stabilising agents may also promote trials in co-operation with Undertakers and with approval of Authorities.

Details of the process, type of ARM to be produced, additives to be used, number and classification of trial sites (minimum 3) and geographic extent and duration shall be agreed.

Participants sign a formal agreement to enter into the trial.

Trials proceed in accordance with A9.5

On successful completion of the Approval Trial the test and inspection results, the range and classification of material types treated, audit process and Factory Production Control and Quality System details shall be made

available to the approving Authority. It shall be agreed which Organisation(s) are being granted approval and who carries the responsibility for maintaining and auditing the Quality System and Production Control.

On scrutiny of the trial data provided an authorised signatory of the Authority signs that the trial was carried out in accordance with the requirements of SROH App A9 and that the material is approved for use as either:

- a) Flowable SMR (FSMR) - Class C1.5/2 or class C3/4
- b) Non-Flowable SMR (NFSMR) - Class C1.5/2 or class C3/4
- c) SMF Class A, B, C or D

It is recommended that WM HAUC materials group be kept informed of the trial and given the opportunity to examine test results etc prior to the granting of approval by the Authority.

Once approval has been granted then the trial details may be presented to WMHAUC and more general approval for use agreed within the West Midlands Area.

It should be recognised that the A9 trial performance requirements ie compressive strength for SMR's and equivalent soaked CBR values for SMF, become SROH specification requirements during general use.

Guidance Notes – Examples of trial details required; not exhaustive.

A) Type and location of trial site:

Are they to be routine utility excavations or excavations for trial purposes? Trials are not allowed in high-amenity or high-duty footways, footpaths or cycle tracks.

Road category or footway/footpath

The layer the material is used as and how the scope of intended use is to be covered. (Refer to A9.5.2.1 7&8)

B) Positioning of trial site

Position of reinstatements within the road eg within n/s wheel track

C) ARM's to be trialled

Detail of the product being produced. This must also cover the class the material complies with and define the construction required eg NFSMR C3/4 to be used as combined backfill, sub base and road base in type 4 roads or footways

D) ARM details

Mix design, binder details, additives, dependencies on site conditions or excavated / base material type and condition.

Specifically: proportions of additive for different excavated material types. Also details of development work/ testing with reference to A9.3 for SMR's and A9.4 for SMF's.

E) ARM's preparation

Details of batching, mixing, transport and placement procedures. Weather protection etc

F) Quality control on site

The details of site testing and assessment carried out to confirm suitability and compliance.

G) Compaction regime

This should apply to both NFSMR's and SMF's, either to confirm that Table A8.1 is appropriate or to identify another regime to achieve the specified performance requirements.

H) Sampling requirements

Types of samples and sampling frequencies for both the trial and for on going QA

I) Testing laboratories

Contact details of Laboratories used to carry out development and assessment testing.