



Department
for Transport

Consultation on the Specification for the Reinstatement of Openings in Highways

March 2019

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Contents

Executive summary	4
How to respond	5
Freedom of Information	5
Confidentiality and data protection	5
1. Consultation proposals	7
2. Proposed key changes	9
Introduction	9
Guarantee periods	9
Air voids – new materials	10
Air voids – laboratory testing	10
Innovation	10
Micro trenching	11
Works in sub-standard roads	11
Infills in modular surfaces	11
Permitted use of previously alternative materials	11
Large diameter coring	11
Clarifications	12
3. Other changes	13
4. Consultation questions	15
What will happen next	19
Annex A: List of consultation questions	20
Annex B: Consultation principles	23

Executive summary

When carrying out street works, utility companies (providers of water, gas, electricity or telecommunications services) must reinstate the highway to prescribed standards. These standards are set out in the Specification for the Reinstatement of Openings in Highways (SROH), a statutory code of practice.

The current (3rd) edition was last updated in April 2010 and much has changed since then. Apart from issues that have arisen over interpretation of its requirements, many innovations in reinstatement techniques and materials have been introduced that are not covered by the code. The 3rd edition was not written with today's pace of technical development in mind. As a result, it is less flexible in its requirements than it might be. In addition, the guidance in places is incomplete, giving rise to disputes over interpretation. Possibly the most contentious area of dispute surrounds the code's requirements on air void levels.

The 4th edition is intended to address these issues while bringing the document up to date. The aim is to provide guidance that is less open to misinterpretation, a specification that is more open to innovation, and requirements that are achievable and verifiable.

We would like to thank members of the SROH working party (a Highway Authorities and Utilities Committee sub-group) for the considerable contribution they made in developing the 4th edition. Their advice was invaluable in helping us to identify the issues to be addressed and in suggesting ways to resolve them.

This consultation document is published alongside a draft of the new 4th edition and the consultation impact assessment. It seeks your comments on the updated SROH and draws your attention to some specific questions on which we would like your views.

The updated SROH will apply to the local road network in England.

How to respond

The consultation period is from 6 March to 6 May 2019.

Please ensure that your response reaches us before the closing date. If you would like further copies of this consultation document, it can be found at <https://www.gov.uk/dft#consultations> or you can contact SROHconsultation@dft.gov.uk if you need alternative formats (Braille, audio CD, etc.).

Please send consultation responses to:

SROHconsultation@dft.gov.uk

When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

Freedom of Information

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the Freedom of Information Act 2000 (FOIA) or the Environmental Information Regulations 2004.

If you want information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

The Department will process your personal data in accordance with the Data Protection Act (DPA) and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

Confidentiality and data protection

If your response to this consultation contains any information that allows you to be identified, under data protection law the Department for Transport (DfT) will be the Controller for this information.

As part of this consultation we're asking for your name and email address. This is in case we need to ask you follow-up questions about your response. You do not have to give us this personal information. If you provide it, we will only use it for the purpose of asking follow-up questions. The information will be kept on a secure IT system within DfT and destroyed within 12 months of the end of the consultation period.

We have contracted Arup/AECOM to analyse the responses we receive. If you provide your contact details, we will share this information with them in case they need to contact you regarding your response.

DfT's privacy policy has more information about your rights in relation to your personal data, how to complain and how to contact the Data Protection Officer. You can view it at <https://www.gov.uk/government/organisations/department-for-transport/about/personal-information-charter>.

1. Consultation proposals

- 1.1 When carrying out street works, utility companies (providers of water, gas, electricity or telecommunications services) must reinstate the highway to prescribed standards as set out in a statutory code of practice called the Specification for the Reinstatement of Openings in Highways (SROH). The current edition was last updated in April 2010.
- 1.2 The code applies to the local road network in England and establishes standards of workmanship and material specifications for the various types of road construction, from flexible asphalt roads through to rigid, reinforced concrete roads. The standards vary according to the type of road and traffic volumes.
- 1.3 The consequences of not meeting the code's requirements are costly. For utility companies, it involves the payment of fines and returning to site to carry out remedial works. For the road user, it is the cost of the additional congestion resulting from a return visit. For local highway authorities, it is the cost of the degradation and premature repair of their highway assets where the non-compliant reinstatement has not been identified as such within the statutory guarantee periods.
- 1.4 Apart from poor workmanship or materials, there are two main reasons for reinstatements giving rise to disputes between the authorities and the utilities. Either the utility contractor claims it is not possible to satisfy the code's requirements or his interpretation of the code differs from that of the authority.
- 1.5 An example of the former is the air voids issue. Many utilities claim that it is not possible to meet the code's air void requirements every single time no matter how conscientiously the work is carried out. Authorities disagree and consider that the air voids limits are always achievable. The truth appears to lie somewhere in the middle.
- 1.6 An example of differences in interpretation is compaction around ironwork in footways. The code covers ironwork in carriageways but the advice is incomplete - utilities claim that the advice, as written, only relates to ironwork in carriageways whereas authorities consider the advice applies equally to footways.
- 1.7 The code has become a barrier to innovation. It only covers alternative reinstatement materials, i.e. alternative to established materials. This means that innovation in techniques is not covered. The result is that new techniques like the large diameter coring and vacuum excavation method are not permitted and can therefore only be used by agreement with individual authorities. In addition, the code's procedure for trialling alternative reinstatement materials was written when the pace of innovation was not as great as it is today. The result is that the code is over-prescriptive in this area.

- 1.8 The code is also out of date. Much of what was considered innovative several years ago has become accepted practice now and therefore needs to be incorporated into the code.
- 1.9 The updated version 4 of the code has been prepared by independent engineering consultants who have worked closely with experts across the sector and representatives from the Highway Authority and Utilities Committee working groups on the SROH and innovation. The DfT would like to thank all those who have been involved in this process to date and appreciates the positive and constructive solutions to the above problems that are presented in the new code.
- 1.10 The consultants also took the opportunity to carry out a more strategic review of the code to ensure that it includes best practice and supports our aims of ensuring quality reinstatements that maintain the integrity of the highway and 'right first time' reinstatements that reduce the impact of repeated works on congestion.

2. Proposed key changes

Introduction

- 2.1 Several key changes are being considered for the 4th edition of the code. They are:
- the amendment of guarantee periods;
 - the introduction of new materials to aid compliance with air voids requirements;
 - the possible recommendation of a preferred method for testing air voids;
 - the rationalisation of the process for introducing innovation;
 - a new specification for micro trenching;
 - advice on works in sub-standard roads;
 - infills in modular surfaces;
 - the permitted use of previously alternative materials; and
 - the permitted use of large diameter coring.

Guarantee periods

- 2.2 The 3rd edition of the code stipulates a minimum guarantee period for reinstatements of two years generally, and three years after deep excavations. Authorities have powers to inspect these reinstatements as they are carried out, up to six months later and up to two years later to check that they are still performing. We have not changed this in the consultation draft. However, we are considering a number of options for increasing the guarantee period in the 4th edition – see consultation **Question 1**. As we move to more of a performance based specification and we improve the speed and adoption of new innovations and techniques, it seems sensible to also consider the minimum guarantee period as this will reduce the risk for local authorities in terms of accepting use of these techniques on the roads for which they have a responsibility to maintain.
- 2.3 One of the options we would like to consider is to increase the standard guarantee period for all excavations up to 5 years. This is proposed in context that product acceptance schemes for proprietary products (e.g. BBA HAPAS) are up to 5 years (e.g. for asphalt thin surfacing options in the Manual of Contract Document for Highway Works Volume 1) and typically 2 years (or less) for surface features/treatments (e.g. high friction surfacing, road markings, surface dressing and slurry sealing). Regardless of the guarantee period for the excavation and reinstatement, any product guarantees would be for the duration based on requirements in the Manual of Contract Document for Highway Works Volume 1.
- 2.4 We would also like to know if there are any proprietary materials not listed in Manual of Contract Documents for Highway Works (MCHW) that are used in street works but could not reasonably be expected to meet a 5 year guarantee period – see consultation **Question 2**.

Air voids – new materials

- 2.5 Air void parameters were included in the 3rd edition because authorities wanted a criterion for establishing the compacted density of bound materials. Before this, the code simply specified the method of layer compaction. Air void parameters were added to give authorities a way of verifying that utilities were achieving the correct material density.
- 2.6 The air void requirements were not considered contentious until some authorities began concerted testing programmes for measuring air voids in reinstatements that were often in good visual condition and, in some cases, many years old. Utilities considered this an unfair application of the air void requirements, especially as it sometimes meant having to redo visually acceptable reinstatements, some of which were over 10 years old. In addition, utilities claim that the requirements are impossible to satisfy 100% of the time, no matter how much compaction was carried out. Highway authorities disagree. We believe that the truth lies somewhere between these opposing views.
- 2.7 While there is therefore some sympathy for the utilities' arguments, it was not felt advisable to omit the requirements and remove the only reliable way of confirming proper compaction. The solution opted for in the 4th edition is to permit the use of alternative materials/asphalt that are easier to compact to the required density. They may be slightly more expensive than the currently specified materials but we consider it is justified when balanced against the ability to reliably meet compaction targets and thus avoid returning to site for remedial works. The new materials have been tested in around five authority areas. In these cases, associated defect rates have reduced significantly - from around 30% to almost 0%.
- 2.8 However, utilities will continue to be able to use conventional materials if they so choose. The price of the new materials/asphalt may also reduce as use of it increases and it is more widely available from more asphalt producers. See **Question 3**.

Air voids – laboratory testing

- 2.9 Several BSI approved methods can be used to determine the air voids ratio but some appear to generate results that are more repeatable than others. The consultation draft mentions a preferred method but it does not stipulate that it must be used. This may change following the consultation. See **Question 4**.
- 2.10 The Notes for Guidance on the code now include a statement explaining that air void measurements of cores taken from reinstatements that are more than 5 years old cannot be relied on because of the tendency for the void ratio to increase over time. As such, a reinstatement that was air void compliant when new could legitimately fall outside the allowable air void limits when it has aged.

Innovation

- 2.11 The process for introducing innovation has been revised to include new methods as well as materials. We have also reduced the code's overly prescriptive requirements in terms of trials and trial periods. Trial periods will no longer be fixed but will be set according to the nature of the innovative method or material under consideration, and

by agreement. This will significantly reduce the time it takes to develop and test new techniques and for them to be adopted. See **Question 5**.

- 2.12 In addition to rationalising the innovation process, a number of materials that were previously alternative materials are now permitted and can therefore be used without agreement with each individual local authority. We have also included the possibility of no trial at all, and no need for extra trials, if the product/technique has already been accepted by other authority.

Micro trenching

- 2.13 A specification for narrow and micro trenching has been introduced. This will support the national roll-out of full fibre networks in the telecommunications sector. However, there are some concerns, mainly around the possibly increased potential for future cable strikes because of the reduced depth of cables/ducts in such trenches. See **Question 6**.

Works in sub-standard roads

- 2.14 Certain roads show signs of deterioration or distress or they might not have not been constructed to modern standards in the first place. In these cases, it might not be possible to reinstate an excavation in compliance with the Code. Where this is so, the new edition says that an authority can agree to meet the costs of reinstating an area of surfacing greater than what would be required in normal circumstances. In the absence of such an agreement, the Code says that the undertaker is under no obligation to extend the reinstatement works but must ensure that the interface between the reinstatement and the adjoining surface does not create a trip hazard. See **Question 7**.

Infills in modular surfaces

- 2.15 Where an existing modular surface is in poor condition, it can be difficult to reinstate the surface without creating a trip hazard. Utilities often install cementitious fillets to mitigate the hazard but by their very nature, such fillets may lack durability. The draft recognises this and stipulates a one year guarantee period for cementitious fillets in such situations. See **Question 8**.

Permitted use of previously alternative materials

- 2.16 In addition to rationalising the innovation process, a number of materials that were previously alternative materials are now permitted and can therefore be used without agreement. This is not considered to be a contentious issue so it does not warrant a specific consultation question.

Large diameter coring

- 2.17 Large diameter coring and vacuum extraction was previously used only by agreement with each individual authority. It is now a permitted method and a specification has been written around it. This means it can be used in any authority

area. This is not considered to be a contentious issue so it does not warrant a specific consultation question.

Clarifications

- 2.18 In places, the 3rd current edition of the code is not always as clear as it might be and this has given rise to disputes between utilities and authorities. We have addressed this by removing areas of ambiguity and adding information to fill in any perceived information gaps. For example, the code now specifically covers reinstatement around small pieces of ironwork, particularly in footways.

3. Other changes

- 3.1 The following lists many of the technical changes that have been made.
- 3.2 A new high bitumen content AC has been introduced to address the difficulties of achieving proper compaction of AC6 DSC in footways.
- 3.3 Polymer modified mastic asphalt has been added as an option where opening around ironwork is too small to compact materials. An option for hand compaction has also been added.
- 3.4 Scope for use of HRA increased. It can now be used to replace AC10 in carriageways and AC 6 in footways thereby allowing a single material to reinstate, for example, a trench located part in the footway and part in the carriageway.
- 3.5 Guidance on layer thicknesses has been rationalised and Table A11.1 has been deleted to remove inconsistencies in advice on layer thicknesses.
- 3.6 A preferred option for determining the maximum density of core samples has been included, and an option has been added permitting trimming the bottom of cores exceeding the specified depth when laid over unbound material.
- 3.7 A specification for applying base edge and tack coating in footpath reinstatements has been added.
- 3.8 Guidance on reinstating reinforced concrete has been expanded upon. It also includes guidance on using large diameter coring and vacuum excavation in concrete roads.
- 3.9 Advice on the early trafficking of concrete has been added.
- 3.10 PSV values have been updated to optimise aggregates properties, in line with materials availability and the Design Manual for Roads and Bridges.
- 3.11 Table NG1.1 has been updated to provide projected flows up to 2033.
- 3.12 BS EN hydraulically bound materials and foamed concrete are now permitted materials
- 3.13 A clarification has been added stating that where a new material/technology has been approved by one authority, it is permitted for use everywhere except where there are sound engineering reasons not to use it.
- 3.14 Guidance on dealing with coal tar arisings has been added.
- 3.15 Guidance on overbanding has been expanded upon.
- 3.16 Guidance on the reinstatement of high friction surface material has been amended to be less restrictive. It can now be applied by operatives following the manufacturer's instructions instead of exclusively by those specifically trained in its application.
- 3.17 Advice has been added on the use of cementitious fillets when reinstating modular pavements in poor condition.
- 3.18 Text on product equivalence has been reintroduced to the preface.

- 3.19 An option to use AC10 for hand raked patches in place of existing AC 14 has been added to aid durability while providing a similar looking surface.
- 3.20 New “Type 1” granular sub-base unbound material has been included to facilitate compaction of backfill in restricted areas. Guidance on testing compaction compliance has also been included.
- 3.21 Guidance on the reinstatement of composite footways has been clarified to avoid misinterpretation.
- 3.22 Guidance on reinstatements in high amenity/high duty areas and on modular pavements has been amended, underpinned by a hierarchy of consideration of safety-durability-aesthetics.

4. Consultation questions

- 4.1 When responding to the consultation, please comment on the analysis of costs and benefits, giving supporting evidence wherever possible (see separately published Impact Analysis). Please also suggest any alternative methods for reaching the objective and highlight any possible unintended consequences of the policy, and practical enforcement or implementation issues.
- 4.2 The code currently stipulates a minimum reinstatement guarantee period of two years in general and three years for deep openings/excavations. In light of the wider strategic changes we are making to the code and the innovations process, we are considering increasing the guarantee period for all excavations to a single 3, 4 or 5 year period. Any increase would not apply to surface features such as road markings or high friction surfacing etc., where the guarantee period would remain at 2 years.

Question 1 - Reinstatement guarantee period

The guarantee period for all reinstatements should be:

- a) left as they are?
- b) 3 years?
- c) 4 years?
- d) 5 years?

A

b

c

d

Comments:

Question 2 - Reinstatement guarantee period

Are there any materials not listed in MCHW that are used in street works but could not reasonably be expected to meet a 5 year guarantee period?

Please list:

- 4.3 We have decided to retain the air voids requirements but permit the use of new materials that are easier to compact to the required density. This would be an option

and utilities would continue to be able to use conventional materials if they so choose.

Question 3 – New materials for easier compaction	
Do you agree that permitting new materials that are easier to compact is the correct solution to the long standing issue over air void compliance?	
Yes	No
Your comments.	

4.4 The draft recognises that there are several methods available for testing for air voids but some appear to generate results that are more repeatable than others. However, although the draft specifies a preferred method, it does not mandate it.

Question 4 – Air void testing	
Do you think that the Code should make the preferred method of testing for air voids mandatory?	
Yes	No
Your comments.	

4.5 The process for introducing innovation in methods or materials is new. Trial periods will no longer be fixed but will be set according to the nature of the innovation under consideration, and by agreement.

Question 5 – Innovation	
Do you agree with the code’s approach to innovation?	
Yes	No
Your comments.	

- 4.6 A specification for micro trenching has been introduced but there are some concerns, mainly around the possibly increased potential for future cable strikes because of the reduced depth of cables/ducts in such trenches.

Question 6 – Micro trenching	
Do you agree that micro trenching should be included as an approved reinstatement method in the Code?	
Yes	No
Your comments.	

- 4.7 Where street works are carried out on roads in poor condition or on roads that do not meet current design standards, reinstatement can be problematic.

Question 7 – Sub-standard roads	
Do you agree with the code’s approach to reinstatement in sub-standard roads?	
Yes	No
Your comments.	

- 4.8 Where an existing modular surface is in poor condition, utilities often install cementitious fillets as part of the reinstatement to avoid creating a trip hazard. The draft stipulates a one year guarantee period for cementitious fillets in such situations.

Question 8 – Cementitious infills	
Do you agree that a one year guarantee period is appropriate for cementitious infills in modular surfaces?	
Yes	No
Your comments.	

- 4.9 Statutory codes of practice usually come into force some time after initial publication to allow practitioners to become familiar with their contents. We seek your views on how long the familiarisation period should be.

Question 9 - Familiarisation period			
Do you think the familiarisation period should be 3 months or 6 months?			
3 months		6 months	
Your comments.			

- 4.10 You are invited to submit comments on any other aspect of the draft document.

Question 10 – Any other comments
If you wish to make any other comments, please do so here.
Your comments.

What will happen next

This is an 8 week consultation. Comments will be reviewed and an updated final version of the code will be published as soon as possible – ideally within 2 months. A summary of responses, including the next steps, will be published within three months of the consultation closing. Paper copies will be available on request.

If you have questions about this consultation please contact:

Gereint Killa

07966 511 761

gereint.killa@dft.gov.uk

Annex A: List of consultation questions

Name:					
Email:					
Are you responding as an individual?				a highway authority?	
a utility?		a contractor?		Other?	
Name of above organisation (if not responding as an individual).					
If responding on behalf of a large organisation, what is it, who does it represent and, where applicable, how were the views of members collated?					

Question 1 - Reinstatement guarantee period

The guarantee period for all reinstatements should be:

- a) left as they are?
- b) 3 years?
- c) 4 years?
- d) 5 years?

A	b	c	d
Comments:			

Question 2 - Reinstatement guarantee period

Are there any materials not listed in MCHW that are used in street works but could not reasonably be expected to meet a 5 year guarantee period?

Please list:

Question 3 – New materials for easier compaction

Do you agree that permitting new materials that are easier to compact is the correct solution to the long standing issue over air void compliance?

Yes

No

Your comments.

Question 4 – Air void testing

Do you think that the Code should home in on a single test method as either a mandatory or a preferred method?

Yes, mandatory

Yes, preferred

No

Your comments.

Question 5 – Innovation

Do you agree with the code's approach to innovation?

Yes

No

Your comments.

Question 6 – Micro trenching

Do you agree that micro trenching should be included as an approved reinstatement method in the Code?

Yes

No

Your comments.

Question 7 – Sub-standard roads

Do you agree with the code's approach to reinstatement in sub-standard roads?

Yes

No

Your comments.

Question 8 – Cementitious infills

Do you agree that a one year guarantee period is appropriate for cementitious infills in modular surfaces?

Yes

No

Your comments.

Question 9 - Familiarisation period

Do you think the familiarisation period should be 3 months or 6 months?

3 months

6 months

Your comments.

Question 10 – Any other comments

If you wish to make any other comments, please do so here.

Your comments.

Annex B: Consultation principles

The consultation is being conducted in line with the Government's key consultation principles which are listed below. Further information is available at <https://www.gov.uk/government/publications/consultation-principles-guidance>

If you have any comments about the consultation process please contact:

Consultation Co-ordinator
Department for Transport
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London SW1P 4DR
Email consultation@dft.gsi.gov.uk