

S1 Operational Principles

Excavation and trench categories (cont'd)

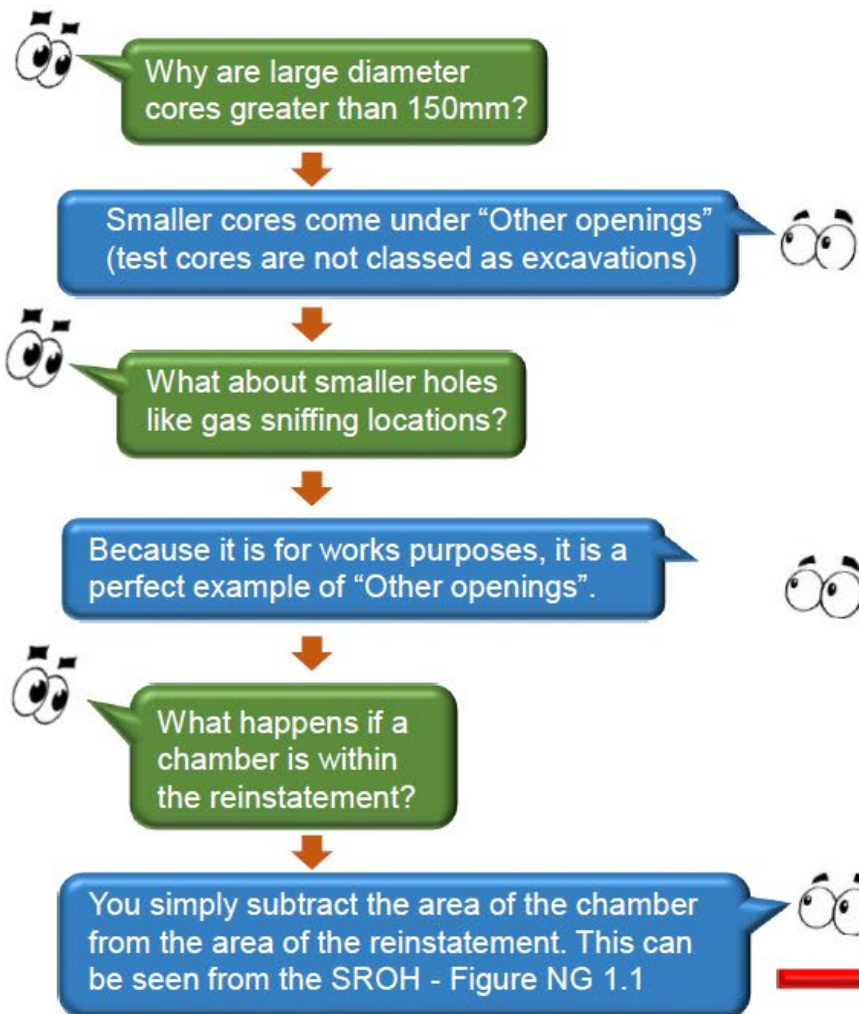
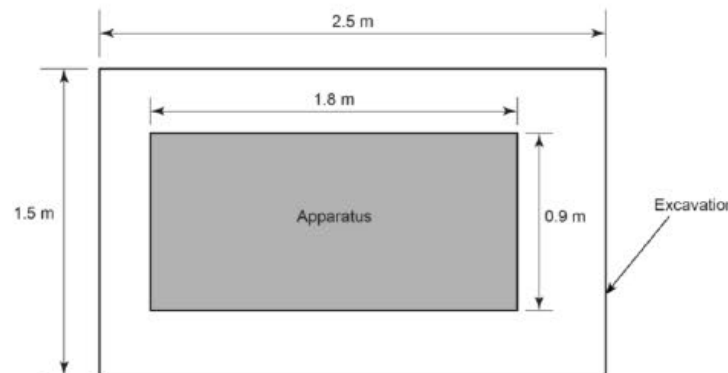


Figure NG1.1 Classifying an excavation where surface apparatus is present



In this example:

A = Excavation surface area* = $2.5 \times 1.5 = 3.75 \text{ m}^2$

B = Apparatus surface area = $1.8 \times 0.9 = 1.62 \text{ m}^2$

C = Reinstatement surface area** = $A - B = 2.13 \text{ m}^2$

* to be recorded in register

** to categorise excavations as per S1.5

Excavation categories: Small excavations in road types 3 and 4 and in footways, footpaths and cycle tracks; other openings in road types 0, 1 and 2.

So the chamber is not part of the reinstatement?

Oh it is, but just not part of the measured reinstatement for materials and methods. It still has to comply with performance requirements of S2 of the SROH.

Where can I find this?

Page 196 of the SROH - Ed4

S1 Operational Principles

Alternative options

What it says in the SROH

S1.6.1 Subject to the provisions for alternative reinstatement materials (ARMs) and alternative technologies (ATs) in A9, an undertaker may adopt an alternative specification for materials and/or the installation process to take advantage of new or local materials and alternative compaction equipment, subject to the agreement of the authority. Agreement from the authority must not be unreasonably withheld (see A9). There can be no departure from the performance requirements during the guarantee period.

What it means

Most of you who have worked within the industry for the past few years will be aware of new and recycled materials that are now used as part of the reinstatement process. In the past, some of these were alternative materials which are now adopted into the SROH and can be used without issue. Alternative materials can be introduced as long as agreement from the authority is granted, and they have passed the criteria set out in A9 of the SROH for trials and testing.



This will allow for innovation and development of materials that will have less impact on the environment whilst maintaining quality of works. If a material has proven to meet required performance standards and trials under A9, there should be no reason to refuse it.



S1 Operational Principles

Immediate works

What it says in the SROH

S1.7.1 There will be times when it becomes necessary to temporarily reinstate an excavation to permit immediate trafficking. In such circumstances, reinstatements may be completed using excavated or other materials compacted in 100 mm layers, with a minimum surfacing thickness of 40 mm of bituminous material.



It is so important to ensure that the correct methods and materials are used when applying immediate works. The image above will show where poor workmanship resulted in a utility receiving a £30,000 fine from the courts.



What does it mean

Sometimes, it may happen that you need to ensure the road is opened and safe for traffic even though the work is not complete. This can be for any number of reasons but the most important thing is that the road is suitable and safe for use. You are allowed to use excavated materials as temporary backfill and ensure it is properly compacted. The aim is to ensure it will hold up to traffic load without failing for the short period of time it will be in place, and that the running surface meets requirements of the SROH for that time.



Note

Immediate works only apply where you need to get a road or footway open to allow the traffic to flow. It is only a temporary measure and should be for a maximum of 10 days unless otherwise agreed with the authority.



Do immediate works have to comply with performance requirements?



Absolutely, although the construction isn't interim or permanent, the surface must meet the performance requirements of S2 under the SROH



Even though the works are not complete?



Correct, immediate works are for short periods just to get traffic flowing, but things like white or yellow lines have to be in place. At a later time, the works will be re-excavated and reinstated according to the SROH.



S1 Operational Principles

Apparatus in roads, footways, footpaths and cycle tracks

What it says in the SROH

S1.8.1 Apparatus over 20 mm external diameter is not permitted within road, footway or cycle track structures unless special circumstances exist (for example shallow cover over culverted watercourses, utility apparatus etc). In these special circumstances the utility must consult the authority whose approval must not be unreasonably withheld.



What does it mean

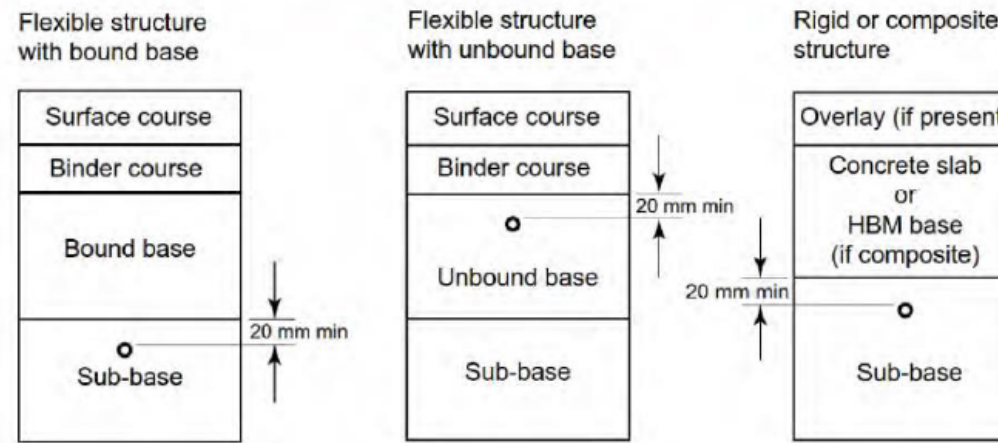
Essentially, you cannot place anything greater than 20mm within the construction or structural parts of a road, footway or cycle track as it may unduly affect the performance. In other words, if you placed a 50 mm duct through a 100mm bituminous layer it would greatly reduce the stability and durability of that structural layer.



For placement of apparatus less than 20mm in diameter there is a helpful reference in the SROH known as Figure S1.1



Figure S1.1 Location of apparatus of 20 mm diameter or less



When looking at this you can see that it is not recommended to place apparatus within a bound layer. Common sense will also suggest placing apparatus within such layers will also put it at risk if somebody excavated it at a later time

S1 Operational Principles

Geosynthetic materials, geotextiles and reinforcement grids

What it says in the SROH

S1.9.1 Where an authority knows of the existence of any of the above materials in areas likely to be affected by an undertaker's work, it should inform the undertaker before works start so that an appropriate reinstatement method can be agreed.

What does it mean

The undertaker should be advised prior to works if it is known where these materials have been used. The SROH goes on to state, if this has not happened and the works have exposed one of these materials, they have to stop works and notify the authority. If the material was damaged during the works and the undertaker was not advised, he will not be held liable for the cost of repair or replacement. (S1.9.2)



What are these materials and what do they do?

They are simply a method to enhance or strengthen existing or new ground conditions.



Reminder

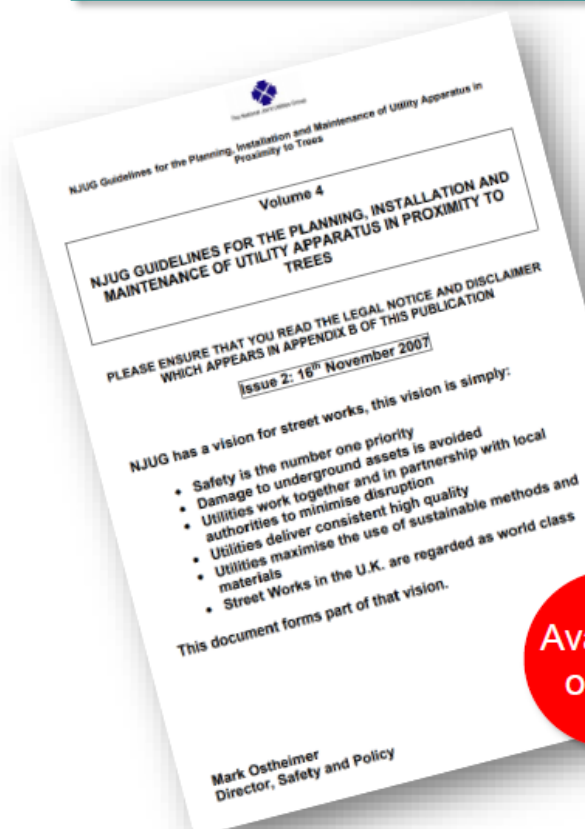
If any of these materials are uncovered during an excavation, it is important to stop works and not cause damage to the material in place. Once the authority has been informed, a solution can be agreed upon that will allow the works to carry on and maintain the purpose of the material found.

S1 Operational Principles Trees

What it says in the SROH

S1.10.1 When working near trees, the National Joint Utilities Group Publication Volume 4 “NJUG Guidelines for the Planning, Installation and Maintenance of Utility apparatus in Proximity to Trees” should be followed. Relevant extracts of this publication are reproduced in NG1.10.

S1.10.2 In addition to the recommendations of the NJUG guidelines, the use of tree root barriers may be considered. Specialist advice from an arboriculturist should be sought.



It is vitally important that tree roots are protected and not damaged when undertaking works.
Works should avoid tree roots wherever possible.
If there is no alternative to working near trees, the NJUG guidance shown on the left should be consulted along with advice from an arboriculturist.

Available
online

Arboriculturist = A tree expert



So if I encounter trees I should seek guidance?

Yes! The SROH refers to the NJUG guidance shown. Trees can be protected and causing damage to one can be illegal. Especially if a TPO exists.

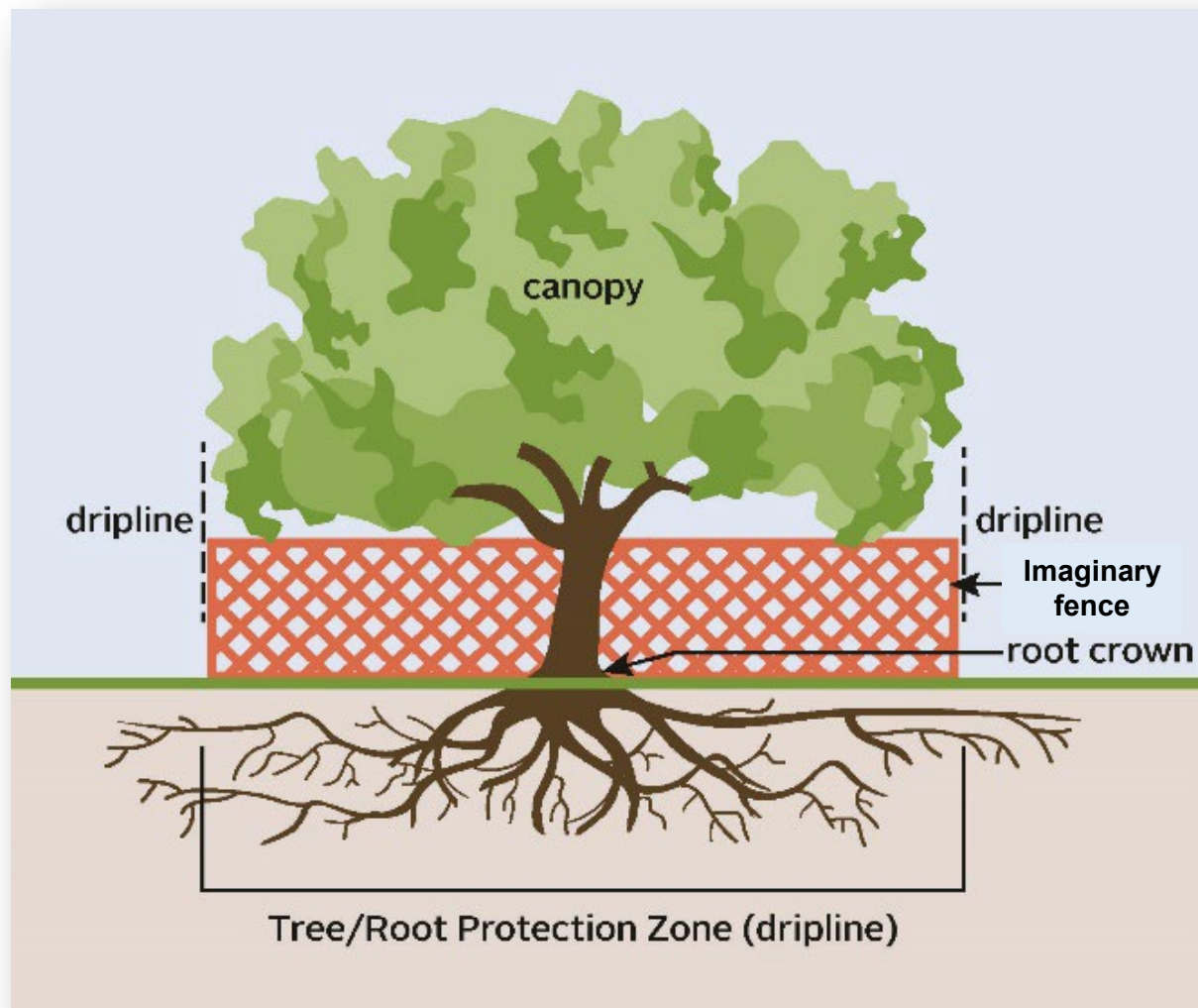
What is a TPO?

A Tree Preservation Order which is a legal protection for the tree(s).

S1 – Operational Principles

Trees

This is a typical example of a tree and the zone where you should not excavate without guidance



For clear guidance, please refer to the NJUG advice note and consult an arboriculturist

For a copy of Guidance on trees, please visit the Streetworks website at: [National Joint Utilities Group \(streetworks.org.uk\)](https://streetworks.org.uk)

S1 Operational Principles

Conciliation and arbitration

What it says in the SROH

S1.11.1 This Code is intended to provide sufficiently detailed guidance to enable agreement on its operation and implementation to be reached at local level. Authorities and undertakers should always work collaboratively and use their best endeavours to achieve a solution to disputes without having to refer them to conciliation. This might be achieved by referring the issue to management for settlement.

What does it mean

Essentially, the Code (SROH) is written in such a way to assist all parties in understanding its contents and requirements. Where there is dispute between the undertaker and the authority, they are required to make all best efforts to resolve the issue between them.



What does conciliation mean?

Simply, it is the action of mediating between two disputing people or groups.



Thank you, can I ask what does arbitration mean?

Arbitration means you may need to appoint an arbitrator to settle a dispute (usually the regional HAUC or independent expert).



Does this always work?

Generally yes, but not always. Sometimes the dispute may be based on a legal issue that is not clear, therefore, the courts may have to rule to help in understanding.



What happens if they cannot agree?

There is another code of practice known as, *Code for the Co-ordination of Street Works and Works for Road Purposes and Related Matters*. This will guide them how and where to seek assistance to resolve the matter




Remember

Collaboration
is usually the
best way
forward



S1 - Summary

 Why does an interim reinstatement have to meet performance requirements?

Essentially, an interim reinstatement has to perform as a permanent one as it maintains safety for the road user. Therefore, it has to meet all performance requirements of SROH Section 2

When does the guarantee period actually start?

From the date the works have been properly completed. If they are not completed correctly to the SROH in the first place, the guarantee cannot start until they do.

If I correct a defect under SROH section 2, does this restart the guarantee ?

As already shown in earlier slides, the guarantee period does not re-start after completion of a remedial repair under SROH S2, unless investigatory excavation is required for cumulative settlement.

When am I likely to see immediate works used?

It is not used very often, but may be that the road is required for use immediately. For example; Imagine there was an event or accident that blocked a road and the council needed to use the road you were working on as an emergency diversion, this would be one reason to apply immediate works.

