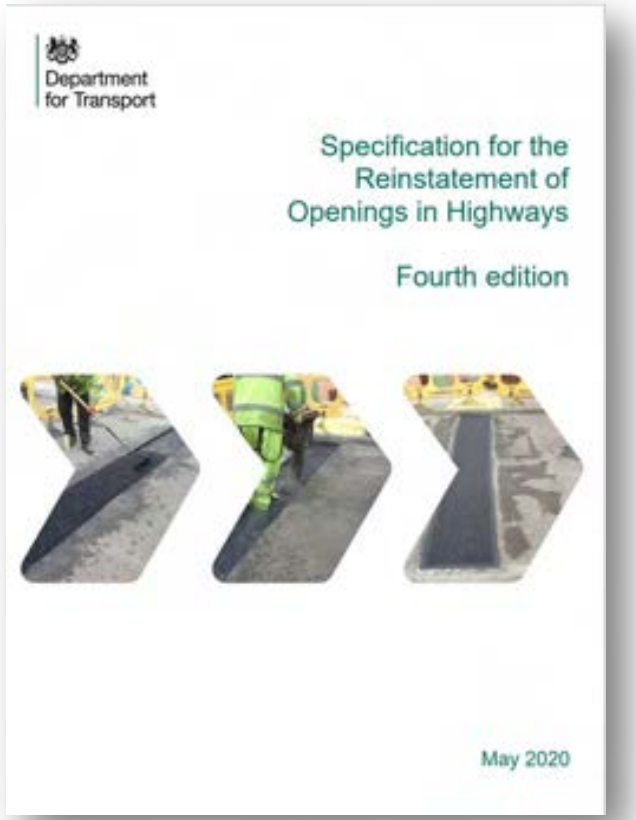
S11 – Ancillary Activities



Researched, compiled and produced by corehard and ENFIELD Council with support through TFL lane rental funding scheme

Introduction- SROH S11

This advisory document is designed to assist incoming and existing Inspectors as support and refresher material. It will be provided in simple language to aid in understanding and avoiding technical or descriptive explanation.

The current edition (Ed 4) of the Specification for Reinstatement of Openings in the Highway (SROH) has been updated to assist readers in understanding, and introduce new methods and developments within street-works.

Remember, the SROH applies to works undertaken on carriageway's, footway's and verge's maintained at public expense (not private roads or land).

You will now be taken through the key items within S11 which will enable you to have a better understanding of what to look for when monitoring Ancillary Activities relating to reinstatement.

Please note:
This document is simply to aid in understanding of the Specification for the Reinstatement of Openings in the Highway (SROH) and should not be used for any other purpose.
The simplicity of language is to assist in explanation, but may detract from certain technical or descriptive specification requirements and, therefore, the SROH should be consulted for clarity.

S11 – Ancillary Activities

What it says in the SROH

S11.1.1 Before opening any works to traffic, all traffic signs, road markings, studs and verge markers removed during the works must be reinstated to a permanent or temporary standard. Temporary traffic signs, road markings, studs and verge markers are permitted for a maximum of 15 working days following completion of the permanent reinstatement.

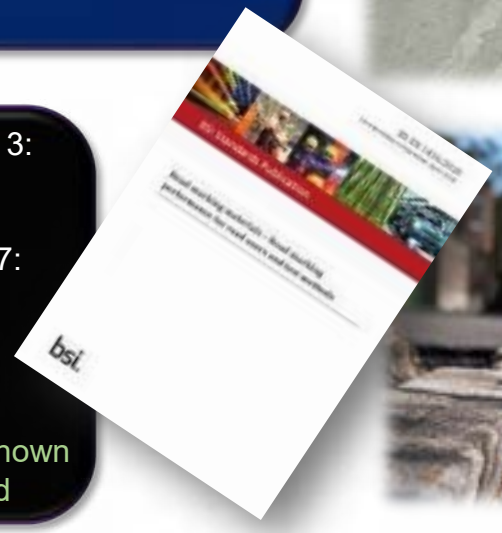
What it means

You can see that road markings studs and verge markers removed can be in a temporary state for 15 working days. However, be aware that performance requirements relating to these items have to be adhered to (skid resistance, reflectivity, tactile paving, etc.). If possible, carry out reinstatement to permanent condition at all times. Remember, even though there may be temporary lines, studs or markers, they must perform to required standards and specification *(as can be seen below).*

Before permanent reinstatement, temporary road markings may be made using quick drying, durable paint, adhesive strip or like materials of similar colour and dimensions to the original markings.
Except where otherwise specified by the authority, the retro-reflectivity and skid resistance of all yellow and white lines must comply with BS EN 1436 *(see below).*

1) Dry retro-reflectivity to Table 3:
Yellow – Class R0
White – Class R2
2) Wet skid resistance to Table 7:
Yellow – Class S1
White – Class S3

Remember, lines must achieve performance requirements as shown within the BS EN 1436 Standard



S11 – Ancillary Activities

What it says in the SROH – S11.2 Street furniture

S11.2.1 Street furniture and features such as tactile paving that have been removed to facilitate street works must be carefully stored during the works. They must be replaced in their original locations before opening the highway to traffic and pedestrians. Advice on replacement may be provided by the authority.

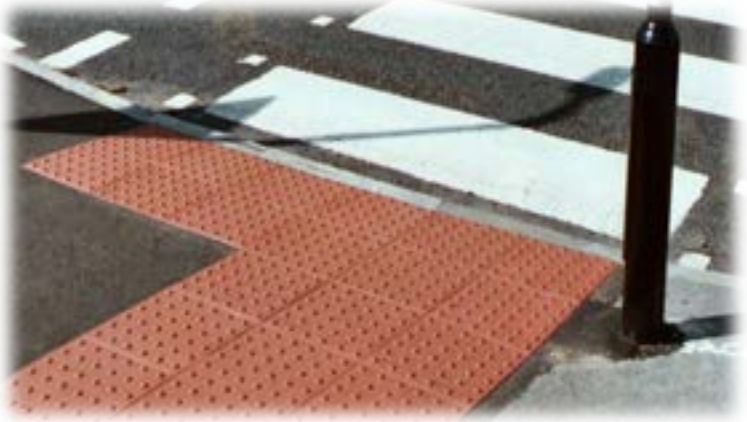
What it means

During the process of works, all materials removed such as tactile paving must be stored for re-use. It is important to ensure that site safety is maintained in terms of persons having visual disability who would rely on such paving. Once works have been completed, the tactile paving will be replaced as originally provided. At no time should the highway be open until this is replaced unless advised otherwise by the local authority.

Different patterns, alignments and even colours can be applied to tactile paving.
Each pattern or texture will warn or advise visually impaired persons of what may lie ahead.
Colours can also warn if sight is only impaired.

What is tactile paving?

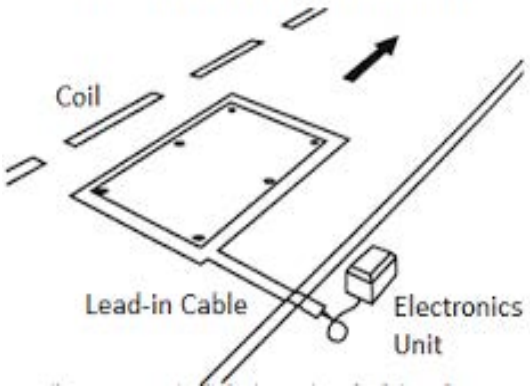
Tactile paving is where persons having limited or no eyesight can feel the raised blisters on the paving. Different textures have different meanings.



S11 – Ancillary Activities

Where excavation is planned at or near to traffic sensors, etc. Advice on precautions to avoid damage must be sought from the relevant authority before work starts.

Figure 1 - The Components of an Inductive Loop Detector



An undertaker executing street works that involve breaking up or opening a sewer, drain or tunnel that is owned by another responsible authority, must obtain the approval of that authority before executing the works.
In the case of a public sewer, “responsible authority” means the sewerage undertaker (i.e. the water service company for the relevant area) or if private, the owner of the sewer.

Where the responsible authority knows of the existence of sustainable drainage systems (SuDS) in areas likely to be affected by the undertaker’s work, they must inform the undertaker, so that an appropriate excavation and reinstatement method can be agreed.

S11 – Ancillary Activities

What it says in the SROH

S11.4.5 If water issues from a reinstatement, the street authority must initiate an investigatory works procedure to determine the cause. Before starting any investigatory work, the authority should contact any undertakers it believes may be responsible for the water egress. Undertakers must cooperate with the authority in its investigation.

What it means

Where it is found that water is leaking from a reinstatement, the authority will ask the utility responsible for the reinstatement to undertake investigation to determine cause of leak. If the leak is caused by the undertaker, agreement will be reached for cost of repair. If it is not the cause of the undertaker, the authority will inform the relevant water company or utility found to be responsible. Notes for guidance under NG11.4 will assist in this process.

S11 – Ancillary Activities

What it says in the SROH – S11.5 Ironwork

S11.5.1 The installation, construction and maintenance of apparatus such as access covers and frames form an integral part of street works. Works undertaken to apparatus must be to the standard and specification of the owner of the apparatus.

What it means

Chamber lids and surrounds must be installed and reinstated to comply with manufacturer recommendations and owner of the chamber. However, it must be noted that the SROH requirements for reinstatement must be maintained and where the chamber construction may not allow for surface course and binder course, a full depth surface course may be used.

Reinstatements around ironwork will relate to the road type and materials surrounding it. Flexible and Composite roads will be as per SROH S6 with Rigid and Modular roads to be reinstated as per SROH S7. Leaving footways and cycle tracks to be covered under S8.

Alternative materials may be allowed in certain circumstances based on road type, road class and material options. Therefore, a Polymer Modified Mastic Asphalt (PMMA) or permanent cold surfacing material (PCSM) may be applied in a Type 4 flexible road on a chamber surround.

It would be unlikely for such a material to be applied in a rigid road construction if surface is concrete *(unless agreed by authority).* However, it may apply if the concrete has a sufficient overlay to allow its use as a stronger alternative to the required bituminous material.

PMMA used in AC road on chamber surround

PMMA materials are usually hot and can be poured into the area for reinstatement.
Therefore, they do not require compaction and because they are polymer modified, are generally very strong once set.

Permanent cold surfacing materials (PCSM), must be properly compacted using appropriate equipment and methods. In certain cases, due to restrictive access around ironwork, the application of pole tampers or hand punners may assist in achieving compaction. However, it must be ensured that sufficient overall compaction is achieved.

S11 – Ancillary Activities

What it says in the SROH – S11.5 Ironwork

S11.5.9 Before applying any bedding, backfill or surfacing material, the receiving surface must be free from loose excavation material and loose supporting materials, and the area must be clear of debris and free from oil, grease, dust or any other visible contaminant.

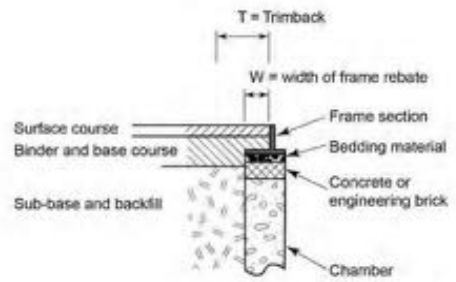
What it means

When working around ironwork, the area on all sides must be clean and prepared, ready for reinstatement of relevant layers around the structure supporting it. Then, the layers can be introduced and compacted as required up to and including surface layers.

Edge preparation of the excavation must comply with S6.8 for flexible roads, S7.5 for rigid and modular roads and S8.6 for footpaths, footways and cycle tracks.

Figure S11.1 Reinstatement next to a chamber

Typical construction



Trimback in the carriageway:

For a flowable material, T = W + 50 mm

For asphalt, T = W + 30 mm + width of compaction sole plate

Trimback in a footway, footpath or cycle track:

For a flowable material, T = W

For asphalt, T = W + 30 mm + width of compaction sole plate


Bedding under frame


Resin mortar


Resin mortar setting


Edge sealant on ironwork and trimback

S11 – Ancillary Activities

Alternative materials around ironwork

The width of trim-back is dependent on the reinstatement materials used.

PMMA

If reinstatement materials are used that require compaction e.g. granular sub-base, HRA, etc., the width of trimback required will be the width of the frame base plus the width of the compaction tool sole plate plus 30 mm.

PCSM (cold lay)

1. If reinstatement materials are used that do not require compaction e.g. concrete or PMMA, then a minimum width of trim-back will be required to install the apparatus and ensure depth of penetration of the flowable reinstatement material.

Resin mortar

2. For roads this will be a minimum of 50 mm in excess of the flange width. For footways, footpaths and cycle tracks the minimum width of trim-back is the width of the flange only (see previous page).

PMMA

When a reinstatement is needed around or between small features, PMMA complying with A2.5.1 and A2.5.2 may be applied as backfill, sub-base, base and surfacing material. Other materials permitted in Section S11.5 may be used if appropriate compaction can be achieved.

PCSM – cold lay *(not usually permitted in HRA road)*

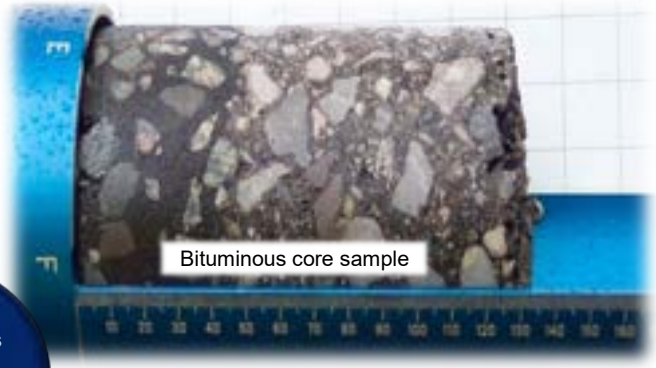
S11 – Ancillary Activities

What it says in the SROH – S11.6 Test holes

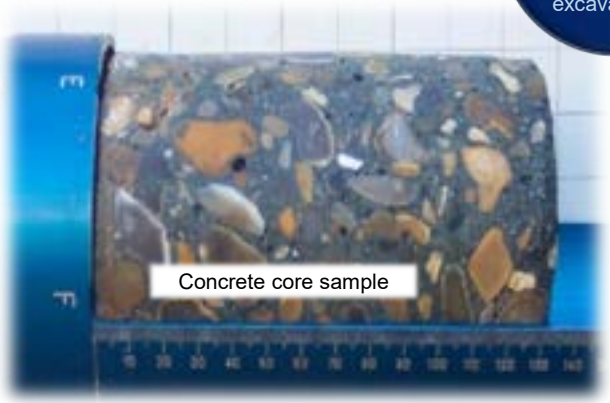
S11.6.1 Test holes over 150 mm diameter are regarded as excavations and must be reinstated to comply with this Code. Test holes of nominal 150 mm diameter or less are not excavations for the purposes of this Code and must be reinstated to a permanent standard within 10 working days of completion of all associated work on site.

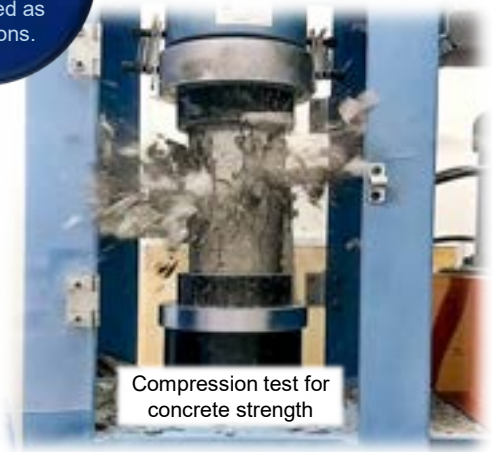
What it means

Essentially, this relates to methods, materials and quality testing.
The test hole will usually be to determine if correct materials and layer values have been adhered to, along with whether sufficient compaction has been applied if relevant. Core samples may be subjected to laboratory testing such as, compressive strength (crush testing), or air voids content (compaction).



NOTE
Test holes less than 150 mm diameter are not classed as excavations.





Before reinstatement, all test holes should be made safe and maintained in a safe condition. Test holes up to 25 mm diameter must be reinstated to an immediate permanent standard.

Test holes larger than 25 mm diameter may be reinstated to an interim standard if required. In modular surfaces, preference should be given to lifting individual modules before drilling test holes whenever reasonably practical.

In unmade ground, test holes must be tamped closed or filled with appropriate materials.

Test holes of 50 mm diameter or less can be reinstated using a fine aggregate bound by bitumen or cement. A self compacting proprietary material *(approved product).* Using a flexible sealing plug. The void beneath the flexible sealing plug must be reinstated using sand and cement mix or a proprietary product.

In paved surfaces, test holes must be reinstated using a fine aggregate, appropriately compacted in layers 100 mm thick or less, and surfaced with appropriate cementitious, cold or hot-lay bituminous materials to finish flush with the surface.

S11 - Summary

Can I use a temporary white or yellow line?

Yes, but you must ensure it meets performance requirements for skid and reflectivity as prescribed under BS EN 1436.

Why?

You have to think of the road user point of view, if there was an incident related to the reinstatement not meeting performance requirements, there may be a liability issue.

Even if it is temporary?

Absolutely, you have to treat the temporary reinstatement as if it were permanent in terms of performance requirements. Otherwise the road user may be effected.

When setting a chamber cover, do I need to paint the ironwork with edge sealant?

Absolutely, all ironwork and exposed vertical edges of existing road reinstatement must be painted to at least 100mm depth where exposed

Is it true that test holes less than 150 mm are not classed as excavations?

Yes, test holes are not classed as excavations as they are not for work purposes, but to test the quality of completed works. However, if you break the surface for any other reason than a test hole, it will be classed as an excavation. Therefore, it will require the relevant noticing and permit procedures to be applied.

All with white lines or marker studs missing