

PROVIDING GUIDANCE TO MANUFACTURERS AND USER COMMUNITIES

GUIDANCE ON BAGGING AND SWITCH OFF FOR ELECTRICAL EQUIPMENT AT WORKS



correct bagging of signal heads

Introduction

This guidance note is intended to provide up to date information on equipment by the roadside and what risks need to be considered when undertaking road or street works. It is particularly where works involve pedestrian crossings – signalised and non signalised; and the use of portable signals around permanent signalling equipment.

This document is intended to be for those undertaking road and street works and emergency operations. For traffic signal maintenance operations, you should refer to the ADEPT Maintenance and Testing of Traffic Signal Installations Guidance (2025)

Whilst it is recognised that works requirements are part of complex and varied agreements, this document provides guidance on the correct processes to undertake. Local Authorities and contractors may determine requirements under contract terms, and these must be considered in all cases on a site by site basis.

The key point above is risk.

What does current DfT guidance say?

Chapter 8 Traffic Signs Manual 2009 states

D5.10.13 When traffic signals are not operating (removed from use) for any significant period of time, they should be bagged. For periods of less than one week, signs to diagram 7019 may be erected instead to indicate that the signals are not in use. The signs should be fixed to the traffic signal posts, and may also be erected in advance, but should never be used if portable signals are in use at the same location.

Chapter 6 Traffic Signs Manual 2019 states

27.1.1 All signal equipment, including push buttons, which are not in use should be bagged over or clearly marked as out of use when they are installed to avoid confusion to pedestrian and vehicular traffic. Signs to diagram 7019 (S14-2-61) may be used to indicate vehicle signals are not working, and “crossing not in use” signs to Schedule 13 for crossings. Bags should be sufficiently opaque so that signal aspects do not show through when lit.

27.1.2 Tactile indicators should also be covered or removed when they are not in use so that visually impaired and deaf people are not misled, especially where tactile paving has been laid.

The Guidance on the use of Portable Signals, ARTSM 2024 states at Section 7:

7.1 If the scheme you are deploying requires a permanent signal installation to be taken out of service, arrangement should be made to switch off the permanent equipment. The traffic authority’s permission must be sought to switch off permanent signals.

7.2 Where portable signals are used near permanent signals that have been taken out of service then the permanent signalling equipment shall be covered (bagged).

(These statements were taken from the previous DfT Traffic Advisory Leaflet 2/11)

Therefore, the requirement is that where signals are not in use **arrangements should be made to switch off the permanent equipment** and, further, where portable signals are used **the permanent signalling equipment shall be covered (bagged)**.

Communication with the local authority should be undertaken, including in emergency cases, and streetworks notices and road space requirements must be checked for confirmation of switch off/bagging requirements.

Regulatory Signs

Regulatory signs attached to traffic signals **must** remain illuminated and uncovered unless there is a TRO in place which negates the regulatory sign. Where regulatory signs are installed the supply is generally isolated from the main signal heads and therefore can remain on when signals are switched off.

Rationale behind these actions

Switch off – The Highway Code states that when signals are not in use drivers should proceed with caution. All permanent signals in the UK fail to all out so that all users can clearly identify they are not in use.

To further assist drivers TSRGD identifies diagram 7019 “signals not in use”. This sign may be used in cases where signals are not in use, including when signals are bagged **EXCEPT** when portable or temporary signal equipment is also used. The risk is that the road user may be confused about which signals are not in use, particularly when a portable signal has for any reason been extinguished (eg battery low).

Bagged/covered – The use of bags highlights to the road user that the signals are not in operation. and enables a quick response by the traffic management team. This is particularly relevant when other signals or signs are used, since it eliminates clutter for the driver more quickly.

Most signal companies will have a how to guide for switching off, bagging and unbagging signals. It will generally include switching the signals to all red, then switching them off and bagging the site off.



Ineffective bagging of a signal head

A check should always be made to ensure that where you have bagged off primaries, the positioning of the temporary signals must not be obscured by the bagging.

Where mast arms or secondaries are not required to be bagged (under local or site specific risk assessment determination) it is imperative that they have been switched off.

Safety Critical Risks

Below is a list of risk factors that you must always consider:

Confusion to the road user

- Signals and lights can be seen through bags in low light – significant risk to vehicles and pedestrians who may not always see a portable traffic signal that has been obscured;
- Significant risk of green conflict where a live signal (bagged) shows a different signal to a portable signal;
- Tactile rotating cones still operate when signals are still on – significant risk to vulnerable pedestrians;
- Audibles also still operate when signals are on – significant risk to vulnerable pedestrians
- Significant risk of not covering all signal heads and buttons – for example missing pedestrian signal heads, low level cycle signals, etc;
- Potential risk for other traffic signal systems not known to the TM operative to remain on which may have a conflict with the signals being bagged – for example a zebra crossing beacon or signalised pedestrian equipment;

- When covering a live site risk assessment would need to ensure that protection was given to all road users – pedestrians and vehicles – on all approaches to ensure whilst only some signals are covered, those visible are not giving misleading signals to drivers and pedestrians;
- When not switched off a road authority will not be aware the signals are out of action. This will impact on monitoring;
- Accessibility technologies such as Bluetooth may not be known – these are not permitted to be signed and therefore it should be assumed that they may be present;
- Regulatory signs covered in error.

Unintended consequences

When signals remain left on there are additional risk factors which must be assessed for the safety of all road users.

Other failings in equipment set up

When a signal remains uncovered, it may not be clear that the signal is in fact not in operation, but it may be presumed that it is a single lamp fault (to the general public) particularly when other vehicles may be occluding a portable signal.

Where equipment is not covered, and portable equipment has not been situated correctly then the risk is that either the pedestrian or the vehicle or both cannot see the function intended by the portable equipment. For example, which button is the correct wait button?

When a signal is covered but not switched off, the light may still be seen by a road user who may take the action indicated even though the signals are not intended to be operational.



*wait boxes not bagged and close together.
Siting of portable pedestrian signal not effective.*

Functional Bluetooth operation



bubble wrap covering active wait box

It is commonplace for operating teams to use covers which are less than adequate. For example, the use of black or orange plastic film and tape. It is also commonplace for such equipment to be insufficiently covered.

We are now in a world of significant technology across our sector. Most equipment relies on wireless functionality. More recently, we have seen the deployment of Bluetooth connectivity, particularly for pedestrian wait boxes.

Bluetooth means that equipment which is not switched off can still be detected by the road user through an app. This is particularly concerning when the road user is a vulnerable road user.

Additional road equipment in use

We have talked about signals above, but the risks also apply to other electrical equipment, especially when these impact on more than one type of road user. Belisha Beacons are an important part of the crossing. When they are not in use, they should be both switched off and bagged to ensure that pedestrians and vehicles are aware they are not operating.

Leaving them on or unbagged gives a level of risk that is insufficient. Pedestrians also need to know that they are not in use, since the law states if you step onto a crossing a vehicle must stop. This is not the case when the crossing is not in use.



plastic cover showing light on beacon

When do you decide?

When preparing to install traffic management for works important factors need to be considered for the safety of:

- The vehicle user
- The pedestrian
- The works team

We regularly hear that ‘in cases of emergency it is not possible to switch off signals’. We are also aware that all local authorities have emergency teams. The decision not to switch off electrical equipment is not one which should be made by a local operative.

In emergencies, the call must be made to the local authority for permission to switch off, and the response should be evidenced on the works risk assessment. For scheduled works, switch off and bag should be identified in the risk assessment from the outset.

When permanent signals have failed as a result of power failure, where there are no works being undertaken, then the local authority shall determine the action required.

ARTSM is currently requesting an amendment to the draft Chapter 8 to include switch off as well as bag for signals and other equipment, when works are being undertaken, as was previously stated in the Pink Book and is now stated in the ARTSM publication Guidance on the use of Portable Signals (GUPS).

Signals companies and local authorities have confirmed that leaving signals on when covered is not good practice.

This document is the agreed best practice by ARTSM and should be used in the absence of any local process.

Vulnerable users must always be considered – what can be inferred by the situation as you have left it?

- Is your site safe for all road users?
- Have you assessed risk for things not done?
- Have you recorded why actions have not been taken?
- Why have the lights not been switched off?
- Why have the signals not been bagged?
- What is the risk for road users of this decision?
- Do you know if there is Bluetooth equipment installed at any location impacted by the signal system?



Acts of omission can be regarded as negligence if you have not considered the risk

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