IWA, COSS or PC blocking a line

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1 Arranging to block a line

1.1 When a line must be blocked

If as described in handbook 6 or 7, it is necessary to block a line, as long as there are no trains or on-track plant (OTP) involved on the line concerned, you must carry out the instructions shown in this handbook.

However, if you are to work in a possession, you must carry out the instructions shown in handbook 9 or handbook 9 ERTMS.
1.2 Agreeing the arrangements

You must agree all of the following with the signaller.

- The line to be blocked.
- The nature of the work.
- The locations between which the work will take place.
- The amount of time needed to do the work.
- The time after which permission can be given for the line blockage to start.
- Which signals will be kept at danger or block markers at which the route will be closed to protect the activity, including those in both directions on a single or bi-directional line.
- Any additional protection needed.
- If the work will take place beyond points that need to be used for train movements.
- The arrangements if single line working is taking place.
- The arrangements to apply at each level crossing.
Diagram HB8-1

Work taking place beyond points that will be used

Signal KS100 will be kept at danger for the route to KS102.

The signaller will not allow trains beyond KS100 unless the points are in the position for the movement to KS108.
Diagram HB8-2

Work taking place beyond points that will be used

Key

- Work

Block marker protecting the work

Route from block marker KS100 to block marker KS102 is kept closed by the signaller.

Trains must not be permitted beyond KS100 unless the points are in the position for the movement to KS108.
1.3 **Working beyond points**

If the work will take place beyond points that need to be used for train movements, as shown in diagram HB8-1 or diagram HB8-2, the signaller will not allow a train to approach those points unless they are in the correct position to protect the work.

1.4 **Working close to the protecting signal or protecting block marker**

Normally your site of work must not be closer than 200 metres to the protecting signal or block marker. If work that will affect the safety of the line must be done within this distance, you must tell the signaller and the following must apply.

- The previous signal must be kept at danger or the route closed at the previous block marker.
- Trains may go beyond that signal only as shown in diagram HB8-3 or diagram HB8-5.
- Trains may go beyond that block marker only as shown in diagram HB8-4 or diagram HB8-6.
2 Blocking the line

2.1 Recording the details

You must complete a line-blockage form (NR3180).

You must read your entry to the signaller to confirm that it is correct.

The signaller will tell you when the protecting signal has been placed to danger or the route closed at the protecting block marker and will confirm that the signal will be kept at danger or the route kept closed.

You must then arrange for the additional protection if it is necessary.

2.2 Additional protection

You must arrange for at least one of the following additional protection arrangements, as shown in section 2.3 to 2.7, to be provided on the line to be blocked whenever this is possible. However, you must always do so if the work will affect the safety of the line.

You must agree with the signaller what additional protection will be provided. The signaller will not give you an authority number until the additional protection is in place.

2.3 Disconnecting signalling equipment

You must ask the signaller to arrange for signalling equipment to be disconnected by the signalling technician to protect the line that is to be blocked.
Diagram HB8-3

Work taking place close to the protecting signal

Signal KS102 will be kept at danger.

Signal KS100 will be kept at danger for the route to KS102.

The signaller will not allow trains beyond KS100 unless the points are in the position for the movement to KS108.
Diagram HB8-4
Work taking place close to the protecting block marker

Route at block marker KS102 is kept closed by the signaller.
Route from block marker KS100 to block marker KS102 is kept closed by the signaller.
Trains must not be permitted beyond KS100 unless the points are in the position for the movement to KS108.
Diagram HB8-5

Work taking place close to the protecting signal

Signals KS200 and KS202 will be kept at danger.

The signaller may allow trains to go beyond signal KS200 at danger to:
- gain access to a station
- use a crossover for single line working
- gain access to a siding.
Diagram HB8-6

Work taking place close to the protecting block marker

Key

- Site of work

200 m

Block marker protecting the work

KS200

KS202

Routes at KS200 and KS202 will be kept closed.

You may allow trains to go beyond block marker KS200 to:

- gain access to a station
- use a crossover for single line working
- gain access to a siding.
2.4 Using a track circuit operating device

Where authorised in the Sectional Appendix, you can use a track circuit operating device (T-COD) as long as the signalling equipment is working normally.

The work that is to be carried out must not affect the correct operation of the track circuit concerned.

You must get the signaller’s permission before a T-COD is placed on the line.

You must tell the signaller when the T-COD has been applied.

2.5 A single line staff or token

You must get the staff or token from the signal box or from the token instrument not at a signal box.

You must follow local instructions if the signal box closes and the staff or token is needed or when it is returned.

2.6 Detonator protection

You must arrange for detonator protection to be placed at the protecting signal or block marker or clear of any points or through crossings beyond.

You must do this in both directions if:

- you are working on a single or bi-directional line
- single line working is in operation on the line concerned.
2.7 Engineering possession reminder (EPR)

Where authorised in the Sectional Appendix, you must ask the signaller to apply the EPR to protect the line that is to be blocked.

3 Granting the line blockage

The signaller will not grant the line blockage to you until the portion of line concerned is clear of all trains unless one of the following applies:

- Where authorised, you and the signaller can be sure that all trains have passed beyond your site of work.
- A train has become disabled, or is at a stand, and will make no further movements until the line blockage is given up.

When you are both sure that the details on your line-blockage form are correct and all the arrangements have been carried out, the signaller will give you an authority number.

You must record the authority number on your NR3180 form. You may now treat the line blockage as granted.
4 During the line blockage

4.1 Protection at the site of work

When you have been given the authority number, you must place a red flag or red light on the approach to the site of work if:

- the work will affect the safety of any approaching train, or
- a group is working.

You must make sure that the red flag or red light is placed in the four-foot where it will be clearly visible to the driver of a train approaching on that line.

You must do this in both directions if:

- you are working on a single or bi-directional line
- single line working is in operation on the line concerned.

4.2 Handing over to another COSS or an SWL

When handing over to another COSS or an SWL, you must explain the details of the line blockage to the new COSS or SWL and give them the NR3180 form.

The new COSS or SWL must sign the NR3180 form.
5 Giving up or suspending the line blockage

5.1 When the line blockage is to be given up or suspended

When the line blockage is to be given up or is to be suspended, you must:

- make sure that any work that is to continue does not need a line blockage
- remove any red flag or red light that has been placed in the four-foot.
- remove any additional protection arrangements as shown in section 2 of this handbook.

If you have the staff or token as shown in section 2.5, you must:
- return the staff or token to the signal box at either end of the section, or
- return the token to an instrument that is not at a signal box.

You must then tell the signaller your name, the authority number and that the line blockage is no longer needed or is suspended.

If additional protection was provided by a disconnection as shown in section 2.3, after you have told the signaller that the line blockage is no longer needed or suspended, you must ask the signaller to get the signalling technician to reconnect the equipment.
5.2 If the line blockage cannot be given up or suspended at the planned time

As soon as you become aware that it will not be possible to give up or suspend the line blockage at the planned time, you must tell the signaller:

- the reason why
- what time you expect to give up or suspend the line blockage.

5.3 When the line blockage is to resume

When the line blockage is to resume after being suspended, you must again carry out the instructions shown in this handbook.

The signaller will give you a new authority number, but you can continue to use the same NR3180 form.

However, if the line to be blocked or the protection arrangements are different, you must complete a new NR3180 form.

6 Role of the protection controller

If there are two or more COSSs, IWAs or SWL who need a line blockage at the same place and same time, a protection controller (PC) must be appointed to take overall control of the shared line blockage.
The PC must wear an armlet on the left arm, or a badge on the upper body with PC in green letters on a white background.

The PC must carry out the instructions shown for the COSS in this handbook.

The PC must hold the NR3180 form and explain the details of the line blockage to each COSS, IWA or SWL who is to share the protection arrangements.

The COSS, IWA or SWL must sign the NR3180 form unless it has been previously planned that it will not be necessary and the COSS, IWA, PC or SWL are aware of what is to happen.

The PC must not give up the line blockage until each COSS, IWA or SWL has confirmed they no longer need the line blockage.

The COSS, IWA or SWL must sign the NR3180 form unless it has been previously planned that it will not be necessary and the COSS, IWA, PC or SWL are aware of what is to happen.

When a COSS or SWL hands over to another COSS or SWL, the new COSS or SWL must give their name to the PC.

If the PC hands over to another PC, the new PC must give their name to each COSS, IWA and SWL using the line blockage.