

GE/RT8000/HB6
Rule Book

Handbook 6

Handbook 6

General duties of an individual working alone (IWA)

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1 Competence

To act as an individual working alone (IWA) you must have with you a valid IWA certificate of competence issued by your employer.

You must carry out the instructions shown in this handbook 6 whenever you are working alone on the operational railway.

2 Work you can do without the line being blocked

2.1 Working more than 2 metres (6 feet 6 inches) from an open line

If the work will not affect the safety of the line and you will not come within 2 metres (6 feet 6 inches) of the nearest running rail of an open line, you may carry out the work without blocking that line.

2.2 Patrolling, examining or inspecting

You can patrol, examine or inspect an open line if you are sure you will be able to look up often enough (at least every 5 seconds) to see any train approaching and:

- you will be able to reach a position of safety at least 10 seconds before any approaching train arrives, and
- you can reach that position of safety without crossing any open line other than the one you are on.

You must not rely on these arrangements during darkness, poor visibility or when in a tunnel.

2.3 Working where there is an approved barrier

If the work will not affect the safety of the line and there is a barrier or fence approved by the infrastructure manager between you and any open line, you may work as follows:

Rigid or tensioned barrier or permanent fence

As long as the barrier or fence is at least 1.25 metres (4 feet) from the nearest running rail of the open line, you may work on the safe side of the fence.

Fence made of barricade tape or plastic netting

If the fence is placed at 1.25 metres (4 feet) from the nearest running rail of the open line and the maximum speed on the open line is no greater than 40 mph (65 km/h), you may work on the safe side of the fence.

If the fence is at least 2 metres (6 feet 6 inches) the nearest running rail of the open line, you may work on the safe side of the fence. There is no restriction on the speed of trains on the open line.

Note: A rigid or tensioned barrier placed at 0.9 metres (3 feet) from an open line along with automatic track warning system (ATWS) is sometimes used when on-track plant is being used close to an open line. You must not use a barrier at this distance as part of your safe system of work.

2.4 Using ATWS or TOWS

If the work will not affect the safety of the line and there is an automatic track warning system (ATWS) or train operated warning system (TOWS), you can use this equipment to give warning of approaching trains if:

- you are competent to use the equipment at that location
- the equipment will provide an adequate warning of all approaching trains on the line or lines concerned
- you will be able to stop what you are doing and reach the position of safety at least 10 seconds before the train arrives.

You must test the warning before starting work.

If the equipment is already in use when you arrive, you must reach a clear understanding with the other person using it so that you each know what is happening.

When leaving the site of work, you must agree with anyone else using the equipment whether or not to leave the equipment in use.

3 Work that needs the line to be blocked

3.1 Types of work

Unless specifically allowed within your company instructions, you must consider the following as types of work that will affect the safety of the line.

- Carrying heavy or awkward equipment or materials across or along the line.
- Work that will affect the condition of the track.
- Digging a hole or stacking material or equipment close to the line or near the edge of a platform.
- Placing a hand trolley on the line.
- Using plant within 2 metres (6 feet 6 inches) of the line.
- Using a road vehicle within 2 metres (6 feet 6 inches) of the line.
- Using on-track plant (OTP) that will foul the line.
- Using a crane or other lifting equipment that will foul the line.
- Attaching anything to a railway structure, such as a bridge, a station roof or building, a signal post or gantry, or electrical equipment.
- Using a ladder, unless secured so that it cannot fall towards the line.
- Using scaffolding or a climbing tower, unless secured so that it cannot fall or move towards the line.
- Felling or trimming trees.

3.2 Before starting work that affects the safety of the line

You must not start any work that will affect the safety of the line unless the line concerned is blocked by one of the following methods.

- You have blocked the line as shown in handbook 8.
- The line has been blocked by a protection controller (PC) and you have agreed a safe system of work with that PC as shown in handbook 7.
- Your site of work is within an engineering supervisor's (ES) or safe work leader's (SWL) work site and you have agreed the safe system of work with the ES or SWL, as shown in handbook 9.
- Your site of work is within a siding and you have agreed a safe system of work with the person in charge of the siding possession (PICOS) as shown in handbook 9.

3.3 Placing possession protection

You may place detonator protection for a possession as long as the PICOP has assured you that the protecting signal for the line concerned has been placed to danger.

You may place work-site marker boards for a work site within a possession as long as the ES or SWL has given you permission to do so.

Aid to working out warning times

	Up	Down
Maximum speed (from the Sectional Appendix or TSR or ESR)		
Time needed to stop work and down tools		
Time needed to reach a position of safety		
Add 5 seconds for working alone	5	5
Add 10 seconds (minimum time to be in a position of safety)	10	10
Total warning time needed (Must be no more than 45 secs)		
Sighting distance needed		
Sighting distance available		

Sighting distance chart (in metres) mph**Sighting distance chart (in metres) mph**

Maximum Speed	Sighting distance, in metres (m), needed to give a warning time of								
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs		
125 mph	900m	1200m	1400m	1700m	2000m	2300m	2600m		
120 mph	900m	1100m	1400m	1650m	1900m	2200m	2500m		
115 mph	800m	1100m	1300m	1550m	1800m	2100m	2400m		
110 mph	800m	1000m	1300m	1500m	1800m	2000m	2300m		
105 mph	800m	1000m	1200m	1450m	1700m	1900m	2200m		
100 mph	700m	900m	1200m	1350m	1600m	1800m	2050m		
95 mph	650m	850m	1100m	1300m	1500m	1700m	1950m		
90 mph	650m	850m	1050m	1250m	1450m	1700m	1850m		
85 mph	600m	800m	950m	1150m	1350m	1600m	1750m		
80 mph	550m	750m	900m	1100m	1300m	1500m	1650m		
75 mph	550m	700m	850m	1050m	1200m	1400m	1550m		
70 mph	500m	650m	800m	950m	1100m	1300m	1450m		
65 mph	450m	600m	750m	900m	1050m	1200m	1350m		

Sighting distance chart (in metres) mph

Maximum Speed	Sighting distance, in metres (m), needed to give a warning time of								
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs		
60 mph	450m	550m	700m	850m	950m	1100m	1250m		
55 mph	400m	500m	650m	750m	900m	1000m	1150m		
50 mph	340m	500m	600m	680m	800m	900m	1050m		
45 mph	320m	420m	520m	620m	720m	820m	920m		
40 mph	280m	360m	460m	540m	640m	720m	820m		
35 mph	240m	320m	400m	480m	560m	640m	720m		
30 mph	220m	280m	340m	420m	480m	540m	620m		
25 mph	180m	240m	280m	340m	400m	460m	520m		
20 mph	140m	180m	240m	280m	320m	360m	420m		
15 mph	120m	160m	180m	220m	240m	280m	320m		
10 mph	80m	100m	120m	140m	160m	180m	220m		
5 mph	40m	60m	60m	80m	80m	100m	120m		

Sighting distance chart (in metres) km/h

Sighting distance chart (in metres) km/h

Maximum Speed	Sighting distance, in metres (m), needed to give a warning time of						
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs
200 km/h	900m	1200m	1400m	1700m	2000m	2300m	2600m
195 km/h	900m	1100m	1400m	1650m	1900m	2200m	2500m
185 km/h	800m	1100m	1300m	1550m	1800m	2100m	2400m
175 km/h	800m	1000m	1300m	1500m	1800m	2000m	2300m
170 km/h	800m	1000m	1200m	1450m	1700m	1900m	2200m
160 km/h	700m	900m	1200m	1350m	1600m	1800m	2050m
155 km/h	650m	850m	1100m	1300m	1500m	1700m	1950m
145 km/h	650m	850m	1050m	1250m	1450m	1700m	1850m
135 km/h	600m	800m	950m	1150m	1350m	1600m	1750m
130 km/h	550m	750m	900m	1100m	1300m	1500m	1650m
120 km/h	550m	700m	850m	1050m	1200m	1400m	1550m
115 km/h	500m	650m	800m	950m	1100m	1300m	1450m
105 km/h	450m	600m	750m	900m	1050m	1200m	1350m

Sighting distance chart (in metres) km/h

Sighting distance chart (in metres) km/h

Maximum Speed	Sighting distance, in metres (m), needed to give a warning time of								
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs		
95 km/h	450m	550m	700m	850m	950m	1100m	1250m		
90 km/h	400m	500m	650m	750m	900m	1000m	1150m		
80 km/h	340m	500m	600m	680m	800m	900m	1050m		
70 km/h	320m	420m	520m	620m	720m	820m	920m		
65 km/h	280m	360m	460m	540m	640m	720m	820m		
55 km/h	240m	320m	400m	480m	560m	640m	720m		
50 km/h	220m	280m	340m	420m	480m	540m	620m		
40 km/h	180m	240m	280m	340m	400m	460m	520m		
30 km/h	140m	180m	240m	280m	320m	360m	420m		
25 km/h	120m	160m	180m	220m	240m	280m	320m		
15 km/h	80m	100m	120m	140m	160m	180m	220m		
10 km/h	40m	60m	60m	80m	80m	100m	120m		

Sighting distance chart (in miles and yards)

Sighting distance chart (in miles and yards)

Maximum Speed	Sighting distance, in miles (m) and yards (y), needed to give a warning time of							
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs	
125 mph	920y	1240y	1540y	1m80y	1m380y	1m700y	1m1000y	
120 mph	1 $\frac{1}{2}$ mile	1180y	1480y	1 mile	1m300y	1m600y	1 $\frac{1}{2}$ mile	
115 mph	860y	1140y	1420y	1700y	1m220y	1m500y	1m780y	
110 mph	820y	1080y	1360y	1620y	1m140y	1m400y	1m660y	
105 mph	780y	1040y	1300y	1540y	1m40y	1m300y	1m560y	
100 mph	740y	980y	1240y	1480y	1720y	1m200y	1 $\frac{1}{4}$ mile	
95 mph	700y	940y	1180y	1400y	1640y	1m100y	1m340y	
90 mph	660y	1 $\frac{1}{2}$ mile	1100y	3 $\frac{3}{4}$ mile	1540y	1 mile	1m220y	
85 mph	640y	840y	1040y	1260y	1460y	1680y	1m120y	
80 mph	600y	800y	980y	1180y	1380y	1580y	1 mile	
75 mph	560y	740y	920y	1100y	1300y	1480y	1660y	
70 mph	520y	700y	860y	1040y	1200y	1380y	1540y	
65 mph	480y	640y	800y	960y	1120y	1280y	1440y	

Sighting distance chart (in miles and yards)

Sighting distance chart (in miles and yards)

Maximum Speed	Sighting distance, in miles (m) and yards (y), needed to give a warning time of								
	15 secs	20 secs	25 secs	30 secs	35 secs	40 secs	45 secs		
60 mph	1 ⁴ mile	600y	740y	1 ¹ / ₂ mile	1040y	1180y	3 ³ / ₄ mile		
55 mph	420y	540y	680y	820y	960y	1080y	1220y		
50 mph	380y	500y	620y	740y	860y	980y	1100y		
45 mph	340y	1 ¹ / ₄ mile	560y	660y	780y	1 ¹ / ₂ mile	1000y		
40 mph	300y	400y	500y	600y	700y	800y	1 ¹ / ₂ mile		
35 mph	260y	360y	1 ¹ / ₄ mile	520y	600y	700y	780y		
30 mph	220y	300y	380y	1 ¹ / ₄ mile	520y	600y	660y		
25 mph	200y	260y	320y	380y	1 ¹ / ₄ mile	500y	560y		
20 mph	160y	200y	260y	300y	360y	400y	1 ¹ / ₄ mile		
15 mph	120y	160y	200y	220y	260y	300y	340y		
10 mph	80y	100y	140y	160y	180y	200y	220y		
5 mph	40y	60y	80y	80y	100y	100y	120y		

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