

**M7-EN.10 RISK ASSESSMENT TOOL**

<b>Hazard</b>		<b>Who (Employees that might be harmed)</b>	<b>Harm</b>	<b>Safety Precautions</b>
<b>Source</b>	<b>Hazard description</b>			
Passing vehicles	– Collisions	Road workers	All types of injuries	<ul style="list-style-type: none"> <li>– Careful marking and signposting</li> <li>– Use of safety clothing</li> <li>– Close the road for certain type of vehicles if the width of the road is less than 3 m. On not so busy roads, a temporary width of 2.6 m could be accepted</li> <li>– If the width of the road is between 3 and 4.5 m the traffic should be regulated</li> <li>– Set up the signs they need before moving on to the works site and set out the rest of the layout</li> <li>– Remember that they are at greatest risk when setting out the signing and guarding, so great care is needed, ensuring that they can see the traffic and the traffic can see them</li> <li>– Face the traffic when setting out signs and take particular care when they are crossing the road to place signs</li> </ul>

Marking equipment	<ul style="list-style-type: none"> <li>- Overturning or falling</li> </ul>	Road workers	All types of injuries	<p>When placing signs, workers must remember that:</p> <ul style="list-style-type: none"> <li>- Signs, lights and guarding equipment must be secured against being blown over or out of position by the wind or by passing traffic. This can be done by using sacks at low level containing fine granular material, or equipment having ballasting as part of its construction</li> <li>- The first sign is placed far enough from the works to give adequate warning of the hazard. Where signs have to be placed on a footway, they must be positioned so as to minimise inconvenience or hazard to pedestrians</li> <li>- They check regularly that the signs have not been moved or damaged or become dirty, including when the site is left unattended for a period of time</li> </ul>
Construction equipment	<ul style="list-style-type: none"> <li>- Collisions</li> <li>- Faulty operation</li> <li>- Noise and vibrations</li> </ul>	Road workers	<ul style="list-style-type: none"> <li>- All types of injuries</li> <li>- Stress</li> <li>- Myalgia</li> <li>- Hearing impairments</li> </ul>	<ul style="list-style-type: none"> <li>- Use machines according to instructions</li> <li>- Use signalman where necessary</li> <li>- Maintain machines carefully</li> <li>- Use personal means of protection for safety reasons</li> <li>- Keep a safe distance from people and avoid swinging above people</li> </ul>

				<ul style="list-style-type: none"> <li>– Machines with a walking operator should be equipped with operating equipment, which safeguards the operator from being stuck between the machine and fixed objects. The machine must stop when the operator releases the operating equipment</li> <li>– Keep a safe distance to power and gas cables, fixed objects and slopes</li> <li>– Avoid overload</li> <li>– Blades or other mobile parts should be kept low when driving and lowered completely before leaving the machine</li> <li>– Clean the machine daily. Caterpillar tracks should be cleaned particularly carefully during periods of frost</li> </ul>
Cranes	<ul style="list-style-type: none"> <li>– Turning over or breakdown</li> </ul>	Crane driver and road workers	<ul style="list-style-type: none"> <li>– All types of injuries</li> </ul>	<ul style="list-style-type: none"> <li>– Use cranes according to instructions</li> <li>– Tower cranes must always be set up by specially trained personnel</li> <li>– Make sure that the ground of the work area is able to carry the load</li> <li>– Keep a safety distance of at least 0.5 m from buildings, goods or construction parts</li> <li>– Keep the yaw area and possibly the driving area properly closed off</li> <li>– Always make sure that all safety devices are adjusted correctly according to the</li> </ul>

				<p>regulations</p> <ul style="list-style-type: none"><li>- During the setting up it is important to control that elevation stop, operational stop, signalling apparatus, etc. function correctly, and that the crane is otherwise correctly equipped</li><li>- Control that cranes do not collide</li><li>- Always leave tower cranes with yaw brake loosened so the crane can turn in the wind direction</li><li>- Be aware of the wind when working with large or light loads. Regardless of the power and stability of the crane, it may be necessary to give up the work even at low wind speed</li><li>- For mobile cranes outriggers are always used according to the instructions of the manual</li><li>- On cranes, handles and buttons should return to neutral position when they are released</li></ul> <p>When it comes to spotters, they must always:</p> <ul style="list-style-type: none"><li>- Keep an eye contact with the operator during work</li><li>- Ensure that no one should remain on a load which has been fastened and lifted from the surface</li><li>- Wear a helmet, safety boots and suitable working gloves</li><li>- Use the proper fastening gear, and scrap</li></ul>
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				<p>damaged or defective gear</p> <ul style="list-style-type: none"> <li>- Make sure prior to the lift that the hook is in a vertical position above the centre of gravity of the load, that the load is in balance, that all straps are fastened correctly, and that the load is not stuck in the surface</li> <li>- Make sure that the load cannot turn over before removing the fastening gear</li> </ul>
Excavations	<ul style="list-style-type: none"> <li>- Falling in</li> </ul>	Road workers	<ul style="list-style-type: none"> <li>- All types of injuries</li> </ul>	<ul style="list-style-type: none"> <li>- Prop up the excavation according to instructions</li> <li>- Establish escape routes according to instructions</li> </ul> <p>Workers near trenches, must remember to:</p> <ul style="list-style-type: none"> <li>- Use the provided equipment with extreme caution</li> <li>- Be aware that trenches more than 1,2m deep meet OSHA's definition of a confined space. In addition, trenches 1,5m or deeper require support unless they are in stable rock</li> </ul> <p>Types of protective systems for cave-ins can be:</p> <ul style="list-style-type: none"> <li>- Sloping - which is soil angled to increase stability</li> <li>- Benching - steps in the trench wall</li> <li>- Shoring - a support system made of posts, wales, struts, and sheeting or hydraulic shoring</li> </ul>

				<ul style="list-style-type: none"> <li>- Trench Shielding - a protective frame or box to protect rescue workers after a cave-in</li> </ul>
Physical impacts	<ul style="list-style-type: none"> <li>- Heavy lifting, pulling and pushing</li> <li>- Bad working positions</li> <li>- Cold, heat, vibrations</li> </ul>	All road workers	<ul style="list-style-type: none"> <li>- Pains in muscles, tendons and joints - especially the back is vulnerable</li> <li>- Myalgia and straining of neck and shoulders</li> <li>- Osteoarthritis, circulatory disorders, inflammation of the sinovial sheath</li> </ul>	<ul style="list-style-type: none"> <li>- Plan the work so unnecessary strain and loads are avoided</li> <li>- Observe the safety precautions indicated</li> <li>- Always use the necessary means of personal protection</li> </ul>