

13
December
2022

WSH ALERT

FATAL ACCIDENT

Worker dies while hoisting tree trunk

On 7 December 2022, a three-man team was loading cut tree trunks onto a lorry crane when a hoisted trunk dislodged from the lifting sling and struck one of the workers, causing him to fall and hit his head against the ground. The worker was sent to the hospital, where he passed away.

Preliminary investigations found that the cut tree trunk was not properly rigged before it was lifted. The worker who carried out the rigging was not trained as a rigger.



Figure 1: Scene of the accident.

Recommendations

This accident highlights the importance of safe lifting practices in the landscape sector, particularly for large or irregular-shaped loads. To prevent similar accidents, consider the following measures:

- Lifting plan:** Develop a lifting plan to determine the requirements for a safe lifting outcome before starting lifting operations. The lifting plan must be supported with a site-specific risk assessment, safe lifting procedure, and authorised via a permit-to-work system.
- Competent lifting team:** Set up a lifting team comprising only members who have received the necessary training for their respective role(s), e.g. crane operator, lifting supervisor, rigger, and signaller. Brief the lifting team on the lifting plan before each lifting operation. Loads must be properly rigged by a competent rigger.
- Safe rigging method:** During lifting operation, it is critical to maintain the centre of gravity (CG) of the load directly under the lifting hook. For long loads, the use of a two-legged sling with double-wrapped chokers is recommended (see Figure 2). The chokers must be at an equal distance from the load's CG to prevent the load from tilting or swinging.

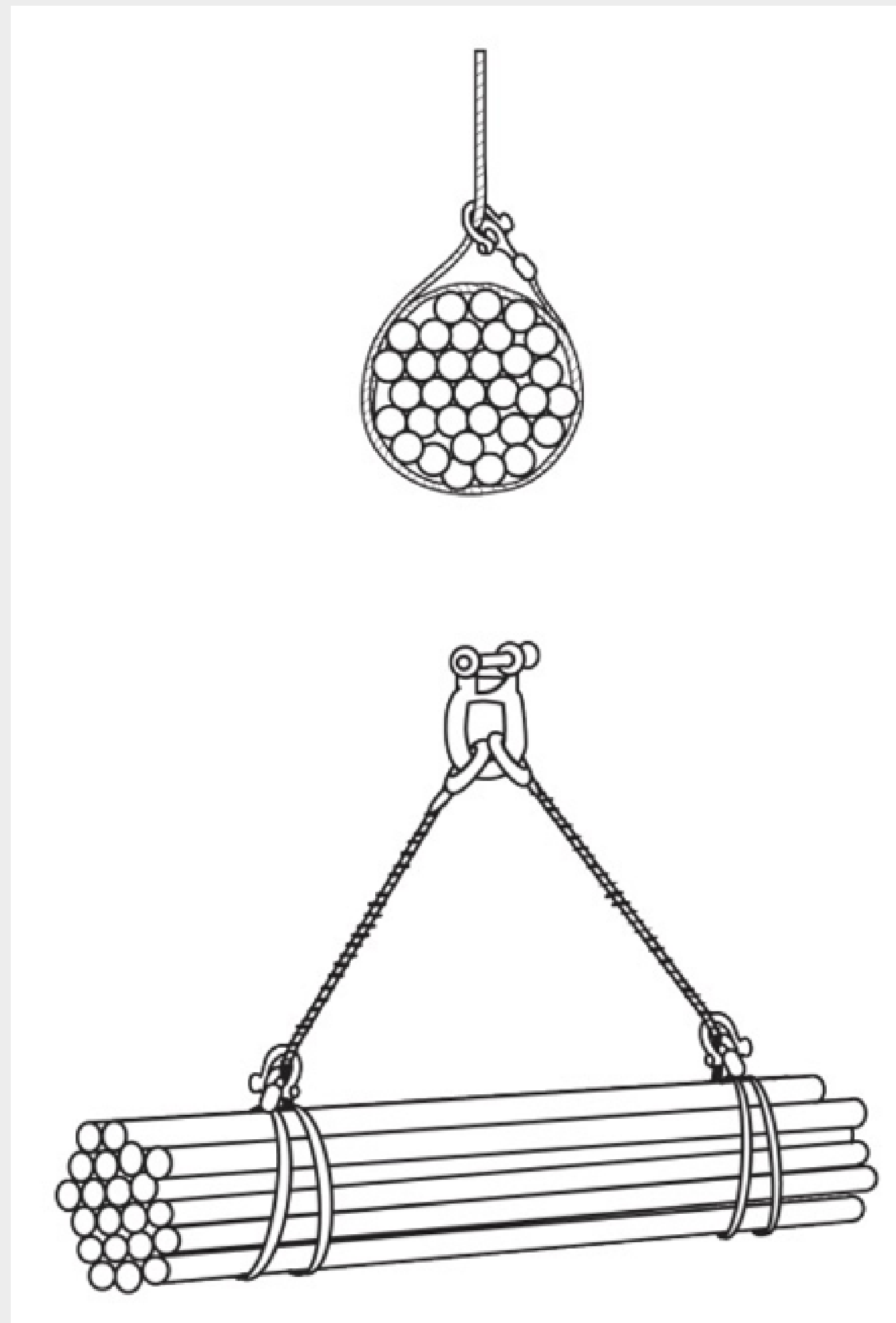


Figure 2: Suggested rigging method for long loads.

In cases where the CG is not obvious, consult an engineer or explore other load management solutions.

- Load management:** Divide or cut large or irregular-shaped loads into smaller easier-to-manage portions, e.g. tree trunks can be cut into smaller pieces for safer lifting. Where practical, consider using a hopper container for lifting the smaller pieces instead of rigging directly to a large or irregular-shaped load.
- Test lift:** Before doing the actual lift, carry out a test lift by lifting the load slightly off the ground and stopping to check for anything abnormal. This is to verify the rigging, confirm load stability and ensure no overloading.
- Safe work position:** Instruct workers never to stand under a suspended load. In cases where the load may tilt or swing, proceed with lifting operations only when all workers are at a safe distance away from the load and the path of load travel. Use tag lines to guide and control the movement of the load during the lift.
- Personal Protective Equipment (PPE):** Provide PPE such as safety helmet, goggles, earmuffs, high visibility vest, gloves, and safety boots to all workers carrying out tree pruning works.
- Work supervision:** Deploy a lifting supervisor onsite to ensure lifting activities are carried out according to the lifting plan and safe work procedures. The supervisor should also confirm that each worker has worn his/ her PPE correctly.

For more information, please refer to WSH (Operation of Cranes) Regulations 2011, WSH Council's [Code of Practice on Safe Lifting Operations in the Workplaces](#), [WSH Guidelines for Landscape and Horticulture Management](#) and [WSH Guidelines on Safe Use of Lorry Cranes](#).

* Information on the accident is based on preliminary investigations by the Ministry of Manpower as at 9 December 2022. This may be subject to change as investigations are still on-going. Please also note that the recommendations provided here are not exhaustive and they are meant to enhance workplace safety and health so that a recurrence may be prevented. The information and recommendations provided are not to be construed as implying liability on any party nor should it be taken to encapsulate all the responsibilities and obligations under the law.

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