

Safe Use of Site Dumpers on Construction Sites

Information Sheet

This information sheet provides an overview of the key safety aspects when operating or managing the use of site dumpers. For the purposes of this information sheet the term site dumper includes all self-propelled wheeled forward tipping machines, which transports, dumps or spreads materials. There are three key factors for the safe operation of site dumpers:



'SAFE DRIVER, SAFE MACHINE & SAFE SYSTEMS OF WORK'

In the five years leading up to 2010 there were seven fatalities in the Irish construction industry involving site dumpers. Six were caused by overturning machines and one was caused by a dumper hitting a pedestrian. It is obvious from these figures that the operation of a site dumper is a high risk activity and must be carried out with extreme care.

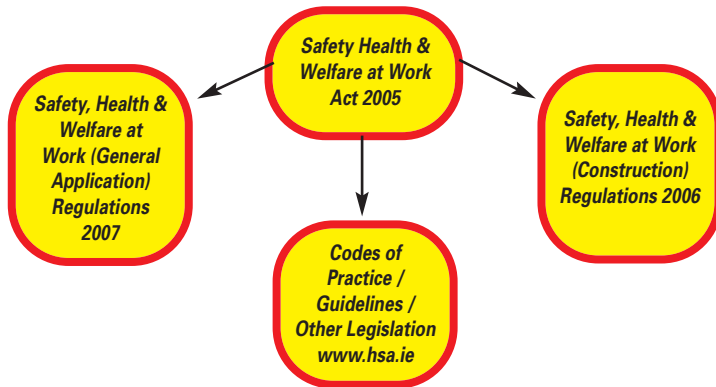
Safe systems of work must be in place to control the risks and all on site have a role in this. Site management must ensure that systems are in place to provide training, to ensure only competent authorised persons operate machines, that safe traffic routes are in place, stop blocks are used for tipping over embankments or into water, work is planned and risk assessed and that workers are

provided with and wear appropriate PPE. The dumper operator has a duty to take care of his/her safety and the safety of others that may be affected by his/her actions. They must comply with managements control measures on site and operate the machine in accordance with the safety training they received and within the limitations of the manufacturer's manual. All site workers have a responsibility too and must wear high visibility clothing when in vicinity of site plant machinery and obey traffic management plans.



What Requirements must I comply with?

When operating site dumpers the primary legislation to be complied with is set out below.



RISK ASSESSMENT

What is a Risk Assessment?

A risk assessment is a careful examination of what could cause harm to people as a result of a work activity. It allows you to take the necessary precautions to prevent harm occurring.

How do I do a risk assessment?

There are five steps to a risk assessment:

1. Look at the hazards.
2. Decide who might be harmed and how.
3. Evaluate the risks and decide whether the existing precautions are adequate or whether more should be done.
4. Record your findings.
5. Review your assessment.

What do I need to consider if I am doing a risk assessment?

If you are doing a risk assessment you need to consider the following:

- the work activity/task;
- the equipment to be used;

- the duration of the work;
- the location of the work activity, i.e. presence of hazards such as excavations, underground services, overhead power lines, other plant and equipment;
- the working environment, e.g. weather conditions, lighting, location of the public;
- condition and stability of existing work surfaces;
- physical capabilities of the workers.

SAFE DRIVER

The following needs to be taken account by management and drivers when operating site dumpers:

- Security – The dumper should only be operated by trained, competent and authorised persons. The key shouldn't be left in the machine when the operator is away from it.
- Training – You must be competent to operate a dumper in the construction industry and hold a current CSCS card in relation to operating a site dumper. The operator should also be given induction training on each site to inform him/her of any site specific hazards, traffic routes, other ongoing works at the particular place of work.
- The skip of the dumper should never be overfilled or overloaded. This could result in materials falling out and injuring somebody, or in the driver's view being obstructed, or in the machine becoming less stable.
- Seat belts must be worn when operating site dumpers and suitable Roll Over Protection (ROPs) must be in place. Fatalities have occurred in the past which directly related to not wearing a seat belt.
- Only transport suitable loads. Dumpers are designed to transport loose fill materials such as earth and small rocks. Objects such as pipes etc. should not be laid across the dumper skip and transported.

- Ensure machines are operated at an appropriate speed. Site dumpers being operated at too high a speed have led to serious accidents.
- Stability – where possible ensure the ground is reasonably level prior to operating dumper. Avoid working on sloped ground where possible. When this is not possible then consult the manufacturer's manual to ensure you are working within the safe capacity/limitations of the machine.
- Operators should be seated when operating machine with their seat belt on. Operators should put the dumper in neutral gear, engage the handbrake and dismount the machine when the skip is being loaded. Never operate the dumper from a standing position.
- Nobody should operate plant machinery if under the influence of alcohol or drugs.
- Never allow anybody ride on the step of the dumper as there is a high risk they could fall and be seriously injured.
- Always be aware of other machine operators and pedestrians in the vicinity of your works.
- Report any defect with the machine as soon as it is noticed.
- Mobile phones should not be used when driving site dumpers.
- Drivers seat becoming detached from body of machine.
- Seat belts not working or missing.
- Handbrakes and brakes becoming ineffective.
- Flashing beacons and warning devices becoming defective.
- Tipping controls becoming defective.
- Inadequate ROPs fitted.

Schedule 6 of the Safety, Health and Welfare at Work (Construction) Regulations 2006 requires the following devices to be fitted to site dumpers:

Dumpers (front tip) no cab	Reversing alarm and flashing beacon
Dumpers (front tip) with cab	Convex mirrors; reversing alarm and flashing beacon

In order to ensure safe machinery, systems must be in place to check for defects and to maintain the machine. A daily prestart check on the basic controls should be completed by the operator as well as a periodic thorough check by a competent person. The dumper must be serviced as required (see manufacturers manual). All dumpers should be fitted with ROPs conforming to the relevant standard

(EN 474- 6:2006, BS EN 1351 0:2000 & BS EN 3471:1994). Tyres must be checked for defects regularly and should be kept at the appropriate tyre pressure.

SAFE MACHINE

The first safety critical decision regarding operation of a site dumper is in the selection of the machine for the task. Always ensure that it is suitable for the task being undertaken as dumpers can vary greatly in size, capacity and stability. Always follow manufacturer's instructions when selecting and operating dumpers.

Once the machine selection is made then it is essential to ensure that the plant machinery being used is in safe working order. Many accidents are caused due to defects with safety critical components of plant machinery. Common defects which occur on site dumpers include:



Identity plate on ROP's showing CE mark

SAFE SYSTEMS OF WORK

- Safe systems of work must be in place. Risk assessments must be completed for tasks and appropriate controls highlighted to relevant personnel.
- Ensure adequate measures are taken to prevent driving too close to an excavation edge causing the ground to subside.
- The weather conditions need to be taken into account. Snow and ice will greatly effect the stability and control of machines. Wet weather can lead to ruts being formed in soft ground which can later make a dumper unstable.
- Ensure pedestrians and vehicles are segregated where possible and any interfaces are controlled.
- Ground should be levelled where possible.
- Stop blocks, chocks or other such devices should always be used when tipping materials over embankments, excavations or into water to prevent the dumper overrunning the edge or overturning.
- Adequate supervision and monitoring of safety rules must be in place.



NOTE: Of the **7** fatal accidents involving site dumpers in the 5 years to 2010 in Ireland, **6** have been related to dumpers overturning. Always ensure that adequate precautions are taken to prevent a dumper overturning or overrunning an edge, when tipping or driving near, excavations, embankments, earthworks, water or to any lower area. Simple control measures such as use of chocks and stop blocks can prevent these accidents.



**'SAFE DRIVER,
SAFE**

**REMEMBER
SAFE MACHINE &
SYSTEMS OF WORK'**

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