

HAZARD HUNTING



Dropped Objects examples

The aim of this presentation

- Raising awareness on the subject of falling objects (DROPS)
- DROPS is the abbreviation of:

Dropped **O**bject **P**revention **S**cheme

What is a Dropped Object?

“An object that falls from its previous static or dynamic position under its own weight”.

We are ALL exposed to **POTENTIAL FALLING OBJECTS**

- A book falling from a shelf ...
- A roof tile from a roof ...
- A bolt falling from 100 m ...
- Other real examples...



How large is the **problem**?

At work:

“Dropped Objects are part of the Top 10 causes of fatal accidents and serious injuries in the Oil and Gas industry”

Home and leisure time:

“The top three causes of fatal accidents are: falls from height, being struck by moving vehicles and being struck by falling objects”.

Static & dynamic **Dropped Objects**

STATIC DROPPED OBJECT (own weight)

Cable enclosure falls due to fixture failing, caused by corrosion.

DYNAMIC DROPPED OBJECT (moving force)

Cable enclosure falls after being struck during lifting activities.

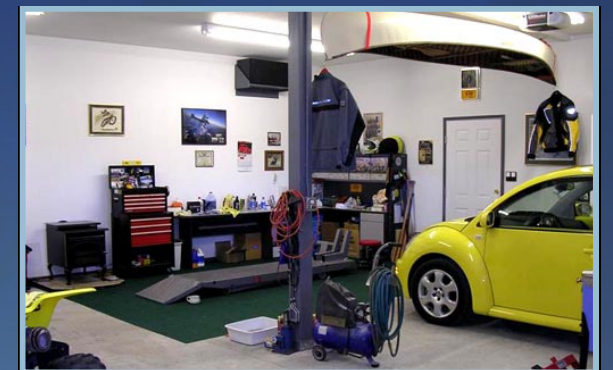
Where do **Dropped Objects** appear?

Dropped Objects are everywhere

But ... there are especially vulnerable **areas** and **activities**:

Home: garages, sheds, gardens, kitchens, shelving

Work: platforms, cranes, lifting operations, stacking and storage of materials



Dropped Objects are everywhere!

Speaker box falls from ceiling at swimming pool in Reeshof, Tilburg; baby fatally injured.



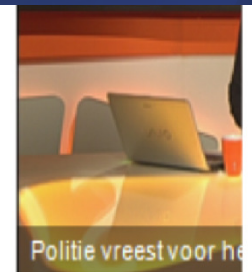
Reeshof in Tilburg zijn een moeder en haar vijf maanden oude baby gewond geraakt toen een luidsprekerbox uit het plafond in het peuterbadje viel. Dat laat de politie dinsdagmiddag weten. De baby is zwaargewond geraakt. De moeder raakte gewond aan haar hoofd, maar kon in ieder geval nog lopen.

Er kwamen zeker vijf ambulances en een traumahelikopter naar het zwembad na het ongeluk. Volgens een ooggetuige ontstond er direct na het vallen van de luidspreker een panieksituatie en vluchtten alle bezoekers het zwembad uit.

De politie laat weten dat de luidspreker in het peuterbadje op een moeder en een baby van vijf maanden is gevallen. Volgens iemand op Twitter was er [veel bloed te zien](#).

Traumahelikopter

* kind is inmiddels met een traumahelikopter naar het ziekenhuis vervoerd. Mensen die in het zwembad op het moment van het ongeluk, kunnen vanavond naar het zwembad bellen voor meer informatie.

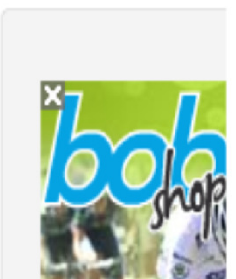


Meer media bij dit

▶ Politie vreest v

▶ Speakerbox v
oude baby

▶ Speakerbox v
maanden in z



Dropped Objects are everywhere!

Man escapes from falling crane.



A man has escaped death in the centre of Putte. The victim was narrowly missed by a falling crane about twenty metres tall.

The accident happened just before nine at the construction site for the New Administrative Centre on the Lierbaan.

A van driver had stopped on the road. He was waiting because of a garbage truck in front of him. The crane crashed down onto the rear seat of his vehicle. The man was only slightly injured.

Dropped Objects are everywhere!



A Chrysler logo about a metre across falls down at one of the most important auto shows in the world!

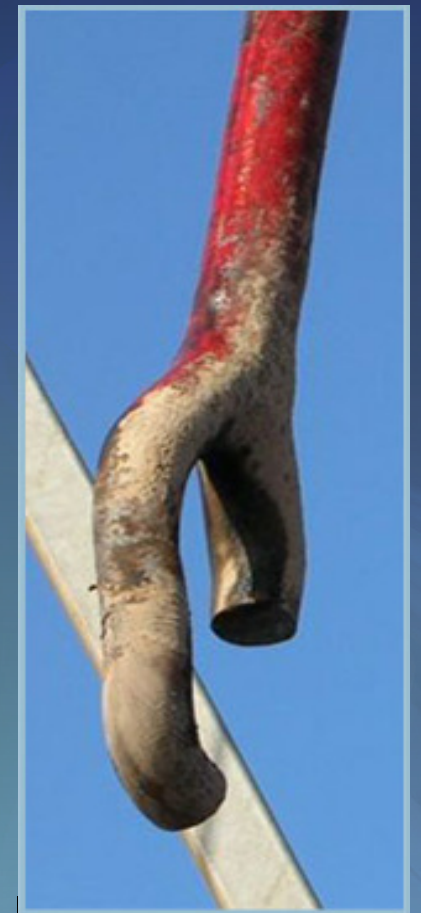
How many visitors had already walked beneath it?



What causes **Dropped Objects**?

Lack of awareness and inspection

- Poor hazard and risk assessment
- Blind to the danger
- Unnecessary/neglected material
- Workplace clutter (Housekeeping)



Dropped Objects Offshore and Onshore situations



Loose parts!

Vulnerable to wind!



Dropped Objects



Ontbrekende bout

Crowbar, loose part



Dropped Objects



Loose part

Missing split pin



What causes Dropped Objects?

Environmental factors

- snow
- ice
- wind
- poor visibility

Extreme conditions

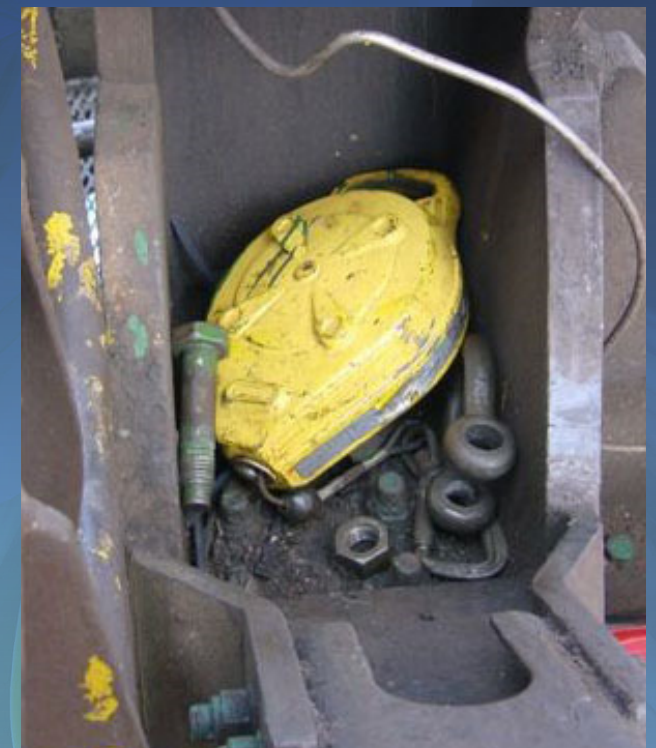
- lightning
- storm
- earthquake, etc.



What causes **Dropped Objects**?

Untidy work area

- Scrap and waste left behind
- Waste and excess material is not cleaned up
- Lack of cleaning / inspection



What causes **Dropped Objects**?

Working at height with tools



Dropped Objects THE REALITY

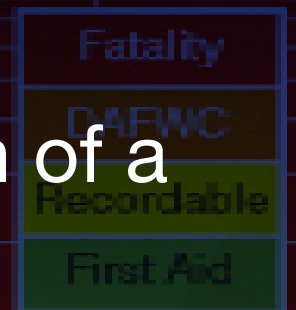
- Drops Calculator and other similar tools should ONLY be used for indication; they are not accurate predictions
- Reality is that even a small object falling from height, can be deadly
- A simple guideline for potential dropped objects ...

**The heavier the object, the heavier the consequence.
The farther it falls, the heavier the consequence.**

DROPS Calculator

1 Considerations:

- The DROPS CALCULATOR is a tool that gives an indication of a possible outcome.
- With light objects (<0.1 kg) we consider the effect that a blunt object can have on the skin and damage of tissue. It is not based on broken glass or sharp metal objects etc.
- Wearing standard PPE, e.g. helmet, safety footwear and eye protection, is included in the calculator.



Dropped Height (metres)

10

1

0.1

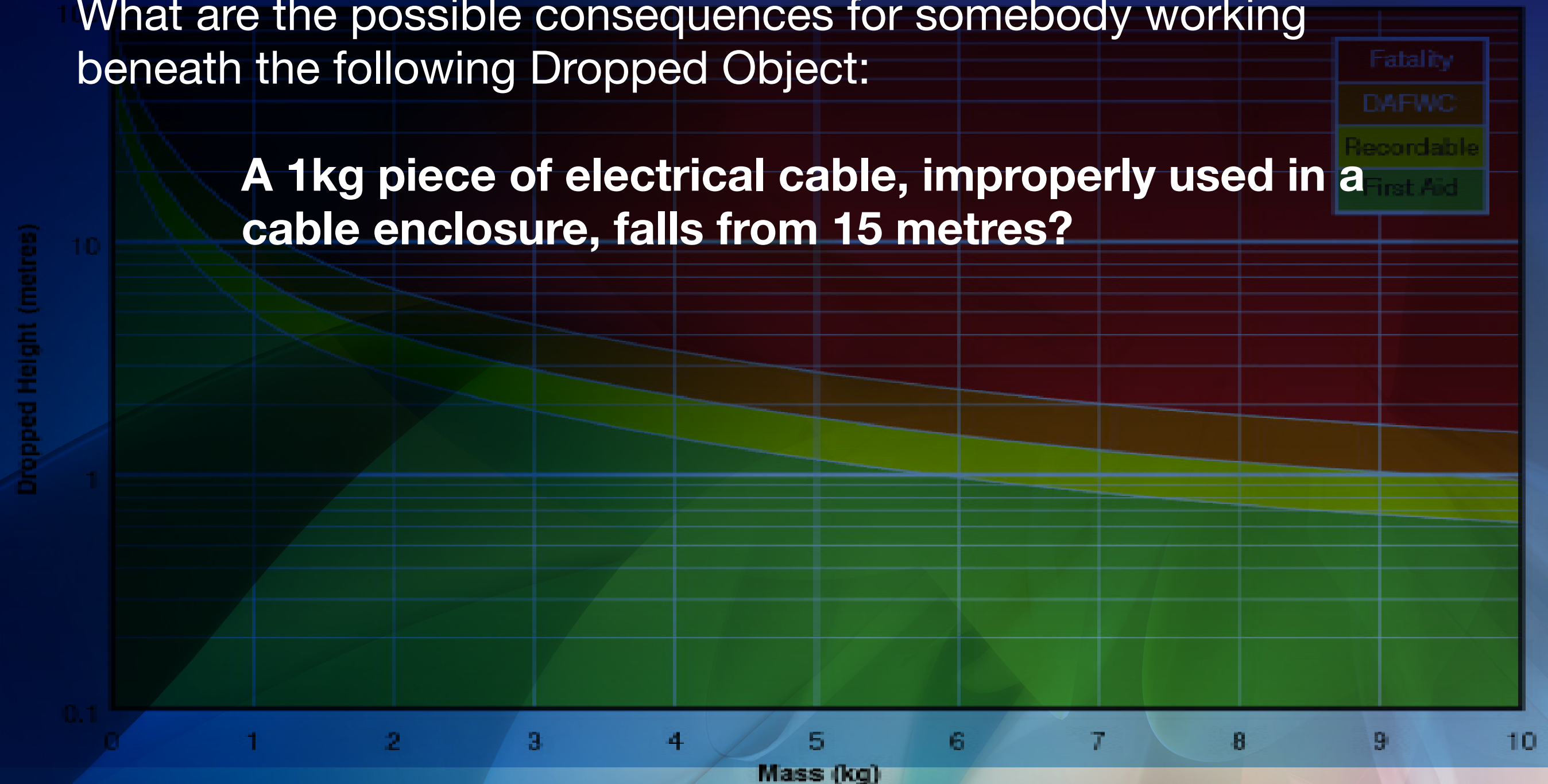
0 1 2 3 4 5 6 7 8 9 10

Mass (kg)

DROPS Calculator: Exercise

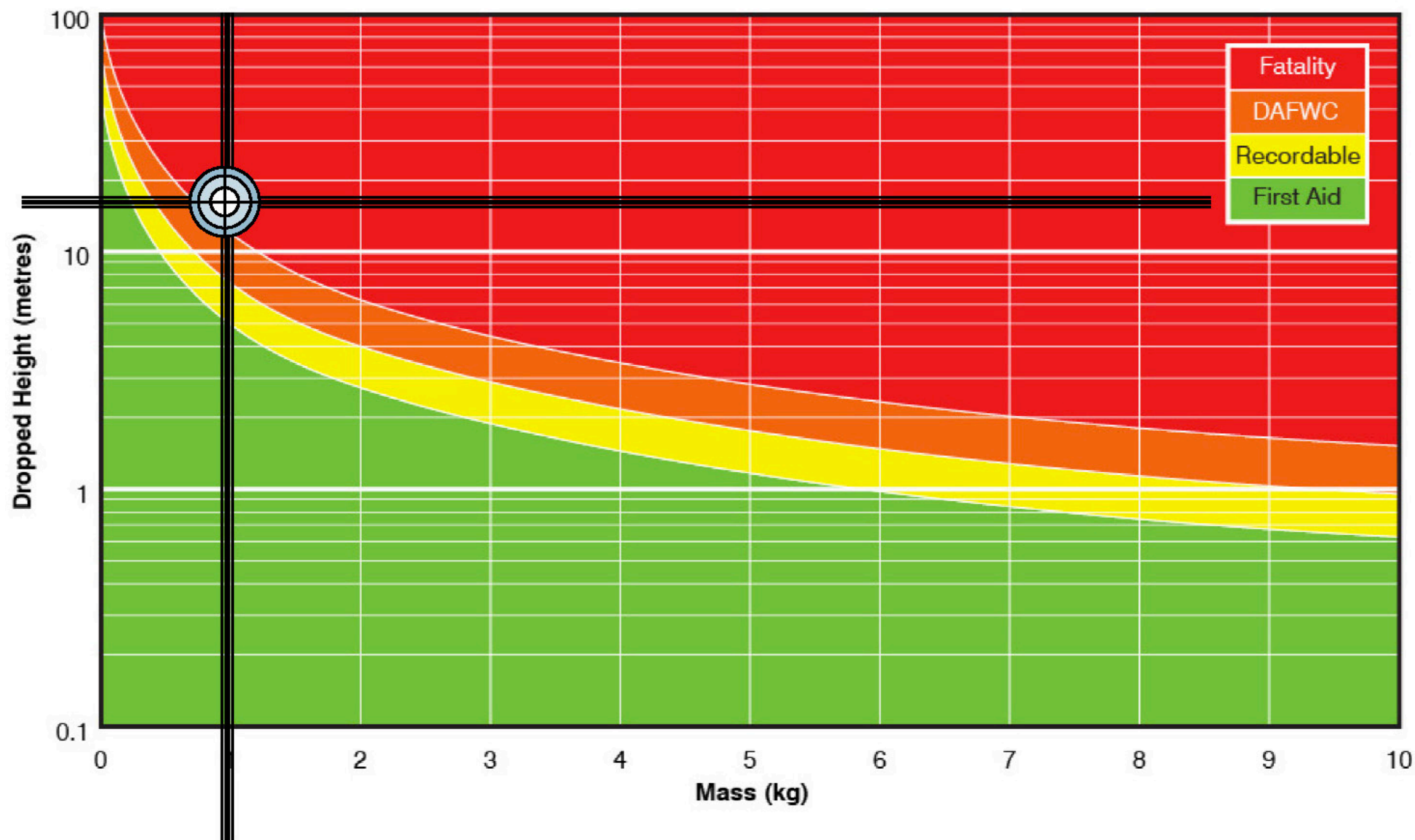
What are the possible consequences for somebody working beneath the following Dropped Object:

A 1kg piece of electrical cable, improperly used in a cable enclosure, falls from 15 metres?





DROPS Calculator: Exercise (go to dropsonline.org)



Insight into **Dropped Objects**

- We now know what a “dropped object” is.
- We recognize how serious the problem is.
- We have heard personal experiences with dropped objects, and discussed examples of serious incidents.
- We have shown that Dropped Objects are more common at certain places and during certain activities, but they can occur anywhere.

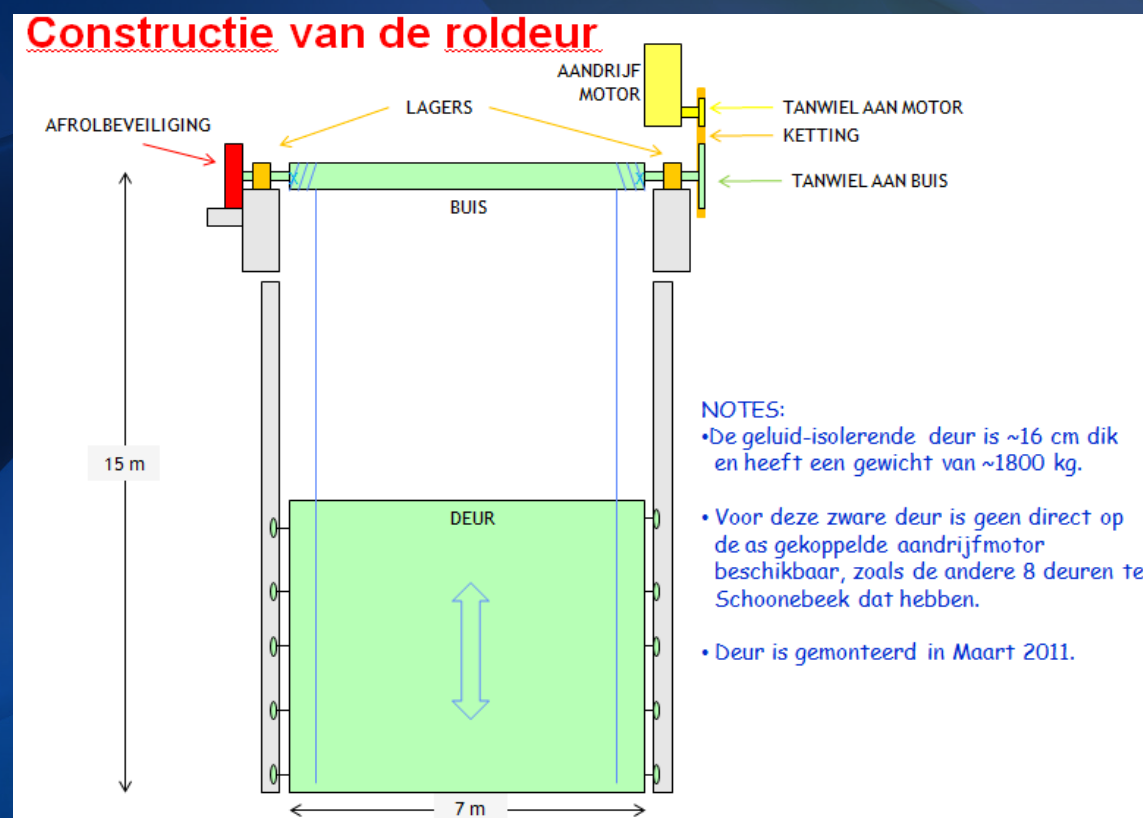
Insight into **Dropped Objects**

- We identified that the main causes of Dropped Objects are influenced by an inadequate culture of safety and behavioural problems, poor cleaning, poor maintenance, incorrect procedures, poor storage and poor planning.
- We have shown that even a small object falling from a significant height can have fatal consequences.



Some more examples

Drive chain (15 kg) of roller door falls from 15 meters height, at the feet of potential victim. This person was lucky!



Some more examples

Stainless-steel pipe where windsock is attached, breaks off.

Weight: 3 kg

Height: 15 metres

DROPS calculator: **Deadly**



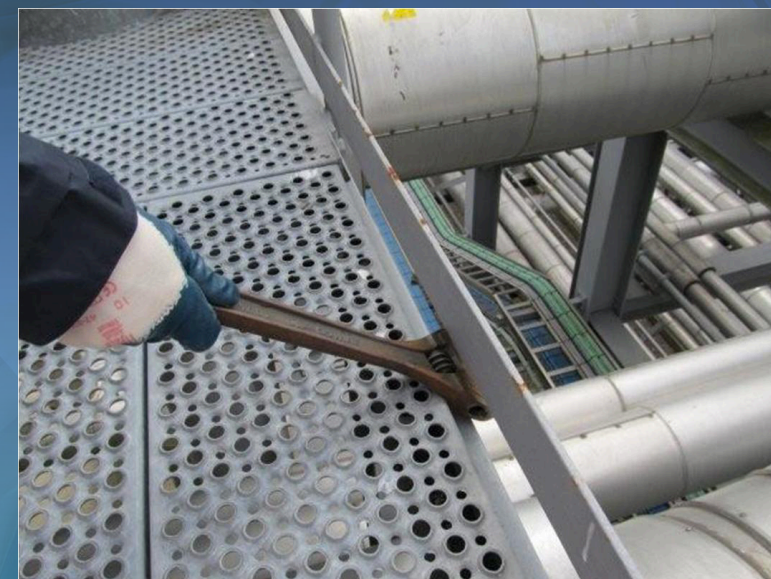
Some more examples

Adjustable spanner on pipeline

Weight: 1.0 kg

Height: 15 metres

DROPS calculator: **Serious injury**



Some more examples

Crowbar falls from 15 metres in cordoned-off area.

Weight: 5 kg

Height: 15 metres

DROPS calculator: **Deadly**



Some more examples

Housekeeping is a constant factor of concern.
Fan has since been removed.



Some more examples

Lifting eyes of basket are not certified. Basket is “usually” lifted by a fork lift truck. Lifting eyes should be removed so that they can no longer be used.

Alternative = get lifting eyes certified



Pitfalls and advice

DROPS safety walk can be seen as an inspection

Important:

- Inform and motivate participants in advance
- Agree on how you want to carry it out in practice
- Make the location team the driving force
- Let examples show what it has achieved

HAZARD HUNTING

Dropped Objects



Thanks for your attention,
stay alert and good luck!