

## Health & Safety: Tackling Slips in the National Distribution Centre

October 2005

Mik a W o o d c o c k  
UK Health, Safety and Ergonomics Specialist



---

---

---

---

---

---

---

---



### What is the NDC?

- One of the Largest Warehouses in the country with a floor space of 46,000m<sup>2</sup> and capable of storing over 1 million tyres at any one time.
- 24 hours a day, 7 days a week operation.
- Days - Inbound, Unloading / Nights - Outbound, Loading
- 45 HGV trailer bays
- Approximately 140 warehouse associates
- Working closely with logistics companies such as Christian Salvesen.

---

---

---

---

---

---

---

---



### The Problem

A significant number of accidents and near misses involving slips in the warehouse reported.

Problem seemed to be occurring mainly around the bays around the bays and entrance / exit doors (truck traffic + pedestrian)

Initial thoughts on the problem included water being brought into the warehouse causing slippery floors. However slips still seemed to occur on dry days when the floor was not wet.

---

---

---

---

---

---

---

---



## The Tool

Slips Assessment Tool (SAT) developed by the Health and Safety Laboratory. Originally called the Pedestrian Slipping Expert System (PSES).

The PSES tool was tested in approximately 40 businesses.

It consists of a hand-held roughness meter (known as a Surtronic Duo or 'Kenny') in conjunction with a PC-based package.

The tool creates a holistic approach to the topic of slips trying to take all factors into consideration.

Ultimately generates a score between 0 and 40+ ranging from 'Low slip risk' to 'High slip risk'

---

---

---

---

---

---

---

---



## Required Information

- The PC based software not only includes the measurement from the roughness meter, but also takes account of:
  - Floor surface type;
  - Nature and extent of contamination (e.g. water, dust, oil);
  - Cleaning regime used;
  - Rate of recontamination of the floor;
  - Type of footwear on site
  - Factors relating to pedestrian use, i.e. carrying of loads; and
  - Presence of elderly / vulnerable persons etc.

---

---

---

---

---

---

---

---



## The Locations



The most commonly reported location of slips was the area in front of the bay doors. Operations in these locations include use of forklift trucks and bowling of tyres.

---

---

---

---

---

---

---

---



## The Locations



Photo of the rear warehouse aisle, halfway down the warehouse

- We also took measurements in other parts of the warehouse including the rear aisle and the traffic (FLT)s door to the outside storage area.

---

---

---

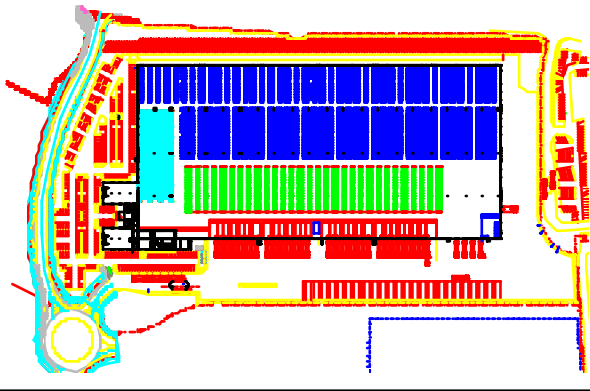
---

---

---

---

---



---

---

---

---

---

---

---

---



## Method & Results

- Several readings were taken across each of the areas in question and a mean value taken for each.
  - 10 values for each bay
  - 5 values for the two doors
  - 10 at intervals along the rear aisle
- It was this mean value that was entered into the software along with the other factors discussed earlier.
- The roughness value throughout the warehouse ranged from 0.9 to 2.5, this for all areas resulted in a medium slip risk from the software's risk scale.

---

---

---

---

---

---

---

---



## Recommended Actions

Given that the warehouse was classified as a medium risk, several measures had to be considered to control the risk. (Workplace Regulations 1992)

- Cellular vulcanised rubber soled safety shoes were recommended for all warehouse staff.
- Increase in spillage kits and awareness how they should be used to ensure faster cleanup of spills.
- Bays were found to be more slippery than other areas due to 'monolube' from tyres, hence an increased cleaning regime was needed.

---

---

---

---

---

---

---

---



## Conclusion

The study was conducted over a year ago.

Since the implementation of the recommendations following the study, slips resulting in accidents have been reduced from approximately 1 per month to zero since the study.

Near misses are also recorded in the warehouse, the number of near misses through slips has also drastically decreased.

---

---

---

---

---

---

---

---



## Questions?

---

---

---

---

---

---

---

---