

# Health and Safety Bulletin

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## Human Error

In September 2016 Alton Towers' owner, Merlin Entertainment, was fined £5 million following an accident on their "Smiler" ride in 2015. In a press release issued in November 2015, after they carried out their initial investigation of the incident, Alton Towers blamed the accident on human error – so why did the HSE decide to prosecute them and why were they found guilty of breaching health and safety legislation?

### *The Smiler accident*

The accident occurred on a day that the Smiler ride was busy. During normal operation of the rollercoaster, a warning light activated. So the engineer was asked to attend and the ride was suspended. While the engineer was dealing with the problem, the operating staff added an extra train to cope with visitor numbers, but they didn't inform the engineer. The ride was recommissioned by sending an empty train around the ride, but it didn't finish the whole circuit – unfortunately no one realized this. The ride was reopened to the public and the first train was started. As it reached the top of the first lift, an alarm activated and it was automatically stopped. The operators checked the ride but only looked for four trains, not noticing the one that remained on the track. The ride's emergency stop system was overridden, allowing the train full of passengers to continue and it crashed into the empty train. There is a video and explanation of the sequence of events at <http://www.bbc.co.uk/news/uk-england-37487220>, however it does show the crash and some people might find it disturbing.

Four members of the public were seriously injured as a result of the crash.

### *HSE's investigation*

The investigation showed that the engineers had not received the Smiler ride's instruction manual, which states that the rollercoaster should not be operated if wind speeds exceeded 34 mph. According to the HSE, a "near-gale" (45 mph winds) on the day of the crash may have prevented the test carriage clearing one of the ride's 14 loops. In addition the engineer stated he "felt pressure" to return the Smiler into service.

The HSE concluded that the root cause of the accident was a lack of detailed, robust arrangements for making safety critical decisions, and that the whole system, from training through to fixing faults, was not strong enough to stop a series of errors by staff when working with people on the ride.

### *Human factors*

The HSE identifies three human factors that can influence behaviour at work in a way which can increase the risk of human error – these are:-

- Job design – failure to match the job to the abilities of the people doing them; this may be as a result of the nature of the task or the procedures that are provided
- Individual – recognizing that the skills, personality and risk perception of employees and how they may influence their behaviour
- Organisation – this includes the influence that the culture and the leadership of the business can have on an individual's decisions, such as whether throughput is more important than safety

### *Summary*

HSE has publicized the fact that it believes the majority of accidents are caused by human error for many years, as well as highlighting that most of these errors are a result of how organisations recruit and manage their employees.

Employers are encouraged to identify the potential causes of human errors in their risk assessments to give them an opportunity to evaluate whether the controls, such as training, are adequate to minimise the risk of human error causing accidents.

This case highlights the human and financial consequences of failure.

### Recently issued health and safety information:

- L23 Manual Handling Operation Regulations: Guidance on Regulations  
<http://www.hse.gov.uk/pubns/priced/l23.pdf>
- HSE's RAPP tool  
<http://www.hse.gov.uk/pubns/indg478.pdf>
- HSG246 Safety in the storage and handling of steel and other metal stock  
<http://www.hse.gov.uk/pubns/priced/hsg246.pdf>
- PHE Use of e-cigarettes in public places and workplaces  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/534586/PHE-advice-on-use-of-e-cigarettes-in-public-places-and-workplaces.PDF](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/534586/PHE-advice-on-use-of-e-cigarettes-in-public-places-and-workplaces.PDF)
- CIPD Mental health in the workplace  
<http://www.cipd.co.uk/hr-resources/factsheets/mental-health-workplace.aspx>

## HSE launches 2016/17 inspection programme

HSE has announced that it will be targeting manufacturing workplaces where carcinogens or asthmagens are regularly used during 2016/17. They will focus on checking risks are being managed effectively to reduce the risk of serious health effects.

The following employer categories and hazards have been specifically identified for inspection:-

- Food manufacturing - flour dust, enzymes in improvers
- Woodworking – wood dust
- Fabricated metal – welding fume, metal working fluids
- Moten metal – dust, fume, chemicals

Further information is available at <http://www.hse.gov.uk/foi/internalops/og/og-00067.htm>

### Case Law update

*This issue focuses on cases associated with human error*

Polyflor were fined **£7,500** with **£34,000** costs after an employee committed what he admitted in court was a foolish act. The Technical Support Engineer was carrying out work on a conveyer – a permit to work had been raised to allow him to carry out the work while the machine was operating although the guard had been removed. Unfortunately his arm was pulled into the conveyer and broken. The defence claimed that Polyflor had not breached any legal health and safety duty because they had not created the risk – however the court found that since the work was authorised under the employer's safe system of work, the onus to take all reasonably practicable steps to reduce the

risk to employees was theirs. Polyflor appealed against the decision stating that if someone's going to do something stupid, you can't stop them, but lost

Heinz were fined **£20,000**, with **£4,496.50** costs, after a 65 year old employee lost his index finger and suffered nerve damage to two other fingers. The man, who had been employed by Heinz for more than 20 years, was using an emery cloth to polish a metal component on a lathe when his gloved hand was pulled in. Heinz had failed to carry out a risk assessment for the work or to provide adequate training. The investigating inspector at the HSE said; "the risk of emery cloth being pulled into rotating metalworking machines is well known. Manufacturing companies should make sure employees are following the latest health and safety guidance on this issue"

### About Clwyd Associates...

We are a management consultancy, focusing on health and safety, and SAP based in the Midlands.

In business since 2000, we employ consultants with at least 15 years practical experience backed up by recognized professional and academic qualifications - ensuring our clients receive first class service.

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### Crash-proof man

A crash proof man has been designed in Australia as part of a new road safety campaign. "Graham" represents how the human body would have to be designed to withstand the forces associated with a car crash – his features include:-

- Airbag-like sacks between his ribs to protect his vital organs
- Hoof-like legs to allow him to spring out of the way of a car quickly
- Enlarged skull and neck structure to protect the ears

The aim of the project is to highlight the vulnerability of the human body in the event of a vehicle collision and to encourage people to make better choices while using the roads



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