

## **CASE STUDY: VolkerWessels UK – Tackling Worker Fatigue in the Rail Industry**

VolkerWessels UK is a leading multi-disciplinary contractor that delivers innovative engineering solutions across the construction and civil engineering sectors, including rail, highways, airport, marine, energy, water and environmental infrastructures.

The rail sector is a major part of our operations and our business unit, VolkerRail, has become one of the UK's biggest railway infrastructure contractors, with a successful track record of delivering advanced projects on the UK's national rail network, working with clients such as Network Rail and London Underground.

We recognise that we have a legal and moral duty of care for the health, safety and welfare of our employees. Health and safety is at the top of our agenda and we continually strive to prevent work-related injuries and ill-health for our employees while also improving their mental and physical wellbeing.

VolkerRail is addressing the important issue of fatigue to safeguard the health and wellbeing of our employees. Fatigue is one of the leading underlying causes of injury in the workplace and at home. Fatigue can pose a significant danger to all employees, whether they are site or office based, working shifts or normal business hours.

### **Company Policies**

VolkerRail has developed a comprehensive Fatigue Management (Working Hours) Policy to control and manage working hours and shift patterns. The policy identifies when an individual should report excessive working hours or inadequate rest breaks. This is broken down into four categories:

- Category 1: More than 12 hours continuous work (including travel time) in any 24 hour period.
- Category 2: Less than 12 hours rest between turns of duty.
- Category 3: More than 72 hours work in a seven day period.
- Category 4: More than 13 turns of duty in a 14 day period.

Under this policy, when an individual is aware they will exceed 12 hours continuous work time in any 24 hour period (due to unforeseen emergency/safety of the line issues), the employee must contact our VolkerRail Control Centre (VRCC). The VRCC will then undertake a risk assessment to determine the employee's fitness to continue working. The control centre is open 24/7 and will implement mitigation strategies if an individual is deemed unsafe to work, including: replacement personnel from another worksite, providing hotel accommodation, providing taxi and other protective and preventative measures.

### **Fatigue Management and Assessment**

VolkerRail is undertaking a fatigue management survey in collaboration with the Rail Safety and Standards Board (RSSB) to address the issue of fatigue. The survey will be analysed by our internal Fatigue Working Group and will be examined at both a company and industry

sector level, where areas of good practice will be shared and areas of concern will be worked on collectively.

We are also using the Fatigue Risk Index Tool developed by the Health and Safety Executive (HSE) on all of our rosters. We are using this tool to ensure that shift patterns imposed do not import potentially high levels of fatigue in the workforce by analysing input levels of mental and physical effort for the tasks being undertaken, breaks and travel.

**Risk Index Calculator**  
Read the manual before using! Go to <http://www.hse.gov.uk/RESEARCH/rpdf/rr446g.pdf>

**Company** Volkerrail  
**Location** Frodingham  
**Shift ID** Model 1  
**Date**  
**Mode** Risk Defaults Reset Index Calculate Index

**Assessor** [ ]  
 Display schedule  
 Display charts  
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Version 2.3

Day	On Duty	Off Duty	Job type / breaks	Commuting Time	Duty Length	Rest Length	Average duty per day	Cumulative component	Duty timing component	Job type Break compor
09/01/2018	07:00	18:30	Default	Default	11h 30m	Fully Rested	11h 30m	0.89	0.94	1.01
10/01/2018	07:00	18:30	Default	Default	11h 30m	12h 30m	11h 30m	0.94	0.94	1.01
11/01/2018	07:00	18:30	Default	Default	11h 30m	12h 30m	11h 30m	0.98	0.94	1.01
12/01/2018	07:00	18:30	Default	Default	11h 30m	12h 30m	11h 30m	1.03	0.94	1.01

Relevant NR Scenarios Model 1 Model 1 FRI **Model 1 RI** Model 2 Model 2 F ...

This tool has been extended to an automated system that is being rolled out across all of our business as part of our rostering tool. All personnel involved in rostering have received training in the use of the Fatigue Risk Index Tool to help them learn how to manage and monitor fatigue. We are also assisting RSSB in the development of a fitness for duty research project to determine sleep and wake predictors to help improve our understanding of fatigue.

**Raising Awareness**

We have developed campaigns and resources using material from RSSB with whom we work closely. Such resources include information on fatigue and techniques for obtaining good quality sleep which we have found to be fundamental for managing fatigue.

We have also launched a resource training hub tailored to our managers, supervisors and employees to raise awareness of fatigue. This includes an interactive toolbox talk which is being used to improve understanding about fatigue and to help supervisors determine fatigue levels across the workforce.

By raising awareness about fatigue, our workforce has discussed with us new ideas for tackling exhaustion. For example, one common issue raised by our shift workers is that they can find it difficult to sleep in hotels during the day due to the noise from other



guests in the hotel and general housekeeping. To help our employees, we have developed our own hi-vis handle card to advise others that there is a shift worker trying to sleep.

To find out more about VolkerRail, please click [here](#) to visit our website.