Fatigue Risk Management within the UK Construction Industry

Dr Shelley Stiles

Gateway Consultants (HSW) Ltd

SUMMARY

Fatigue is reported an important contributory factor in safety incidents across UK, including within the construction industry. The aim of this study is to gain a better understanding of existing organisational arrangements for the management of fatigue risk within the UK construction sector and compare maturity of the approach with other industries.

KEYWORDS

Fatigue, construction, organisational maturity

Fatigue and UK Construction

The UK Construction industry has one of the highest rates of poor psychosocial health, including fatigue. Fatigue is considered to be a decline in mental and/or physical performance that results from prolonged exertion, sleep loss and/or disruption of a person's 'internal clock'. Worker fatigue can result in a lack of attention, slower reactions, reduced co-ordination, decreased awareness, underestimation of risk, memory lapses or absent-mindedness and a reduced ability to process information.

Fatigue can arise as a result of excessive working time or poorly designed shift patterns. It is also related to workload, since workers are more easily fatigued if their work is complex or monotonous. The characteristics of the construction industry predispose conditions for fatigue associated with a peripatetic workforce, skills shortage, national contracts, and a high proportion of self-employed workers. An industry study by Considerate Constructors Scheme established that long working hours (86% more than 40 hours per week), extensive routine travel (44% travelling to work 2 to 3 hours each day), high workload demands both cognitive and physical are the norm across the sector.

Fatigue management in other industries

There are other industries such as aviation, rail, oil and petrochemical, healthcare, transport and logistics, which require a fatigue risk management system (FRMS) as part of the normal licence to operate within those sectors. Key components of a FRMS include policy, objectives, risk management, assurance and promotion of fatigue. Often this more stringent approach has followed major disasters where fatigue has been identified as a causal or contributory fatigue such as the Challenger Space Shuttle disaster in 1986, or Clapham rail disaster in 1988, where the ensuing investigations identified significant changes to each industry's approach to fatigue. There has not been a similar disaster within the construction sector where fatigue has been identified as a causal factor, and therefore the licences to operate within the sector are less stringent.

The aim of this study is to gain a better understanding of organisational arrangements for the management of fatigue risk within the construction sector, in comparison with other sectors.

Study Approach

The study was undertaken in two parts, firstly an online survey of organisational arrangements, and secondly comparison with FRMS information from other industries using industry legislation, standards, and guidance. The industries included were aviation, rail, oil and petrochemical, healthcare, transport and logistics. This paper provides details on part one only.

Part one of the study involved an online survey of 19 organisations from within the construction sector to identify their approach to fatigue risk management including fatigue policy, fatigue training. There were organisations who worked within the civils, residential and commercial building and infrastructure sectors of construction and included Principal Designer, Designer, Principal Contractor and Contractor roles on projects. The organisations all employed more than 10 people, with a turnover more than £2 million per year.

Study Findings

Of the 19 organisations, many have fatigue related policies in place which are applied across the organisation including construction projects and the subcontract workforce.

- 64% have a fatigue risk management policy, with 41% having a night worker policy
- 82% have a driver fatigue management policy
- 50% had a travel and/or commuting policy (most organisations allowed a commute time of 30 minutes to 2 hours each way for each shift)

In terms of typical shift duration, most organisations (84%) rostered daytime shifts of circa 10 hours, with 31% rostering shifts of more than 12 hours. 42% also rostered night shifts (between 18.00 and 06.00). The majority also defined the minimum rest period between shifts as 12 hours, and one day off each week. Commuting/travelling was included within roster planning. However, more than half of organisations did not undertake specific fatigue risk assessments as part of their roster planning.

68% of organisations provide fatigue management training to their teams, although those working solely in building (both residential and commercial) provide no specific fatigue awareness training. Organisations employing less than 250 people with an annual turnover less than £25million all had training in place, where not all of the larger organisations had this in place. Beyond having fatigue-related policies and training in place, most organisations did not involve their workforce in designing and reviewing rosters, have established fatigue performance indicators, or make provisions to aid individual wellbeing (exercise, nutrition, quality of rest).

Conclusions

Conclusions are based on part one of this study with 19 participant organisations, recognising that such a limited number may not be representative of the whole industry. This study has found that the majority of organisations working in the infrastructure and civil engineering sectors of the construction industry have fatigue related policies in place, specifying hours of work (including travel and commuting) and they provide fatigue training to their teams. Small to medium-sized organisations also have more fatigue-related arrangements in place, probably due to their direct employment of those frontline construction workers who are exposed to the greater fatigue risk from both physical and cognitive demand. FRMS are less established within the building (both residential and commercial) sectors.

Contemporary Ergonomics and Human Factors 2025. Eds. D Golightly, N Balfe & R Charles, CIEHF.

Reference

Considerate Constructors Scheme <u>https://ccsbestpractice.org.uk/spotlight-on/spotlight-on-worker-fatigue/#Introduction</u>