

## MANAGING FATIGUE WITHIN MARINE PILOTAGE

Ports of Sydney Perspective  
Sydney Sea Pilots

Sydney Sea Pilots Pty Ltd (SSP) is a privately owned and managed company contracted to the Sydney Ports Corporation for the purpose of supplying qualified pilots to safely pilot commercial ships into and out of the Ports of Sydney and Botany. SSP recognised the Duty of Care imposed by OHS 1983 NSW Act to provide a safe working environment for its employees and consequently started to address the problem of fatigue in 1995.

We recognised the main causes of a fatigued pilot to be numerous following studies done by Yossi Berger in 1984 and Shipley 1978. Because of the nature of our work the consequences to the port and infrastructure could be jeopardised by fatigued company personnel with the extreme result being economically and environmentally adverse. Various initiatives were addressed and enacted upon and further study is being undertaken to better address the problem of fatigue within our organisation and pilotage generally.

1. The major causes of fatigue recognised within our organisation are:
  - a. 24 hour a day, 7 days a week operation.
  - b. Adverse weather affecting working conditions – swell, wind, fog and rain.
  - c. Increase in adrenalin levels when handling ships in adverse conditions and restricted manoeuvring areas.(Berger 1984).
  - d. Intense concentration and increased heart rates.(Shipley 1978).
  - e. Embarking and disembarking especially at night in bad weather as this is both physically and mentally demanding.
  - f. Reliability of the piloted ship and level of crew competence.
  - g. Harbour congestion especially on weekends.
  - h. External stress
    - personal matters
    - pressure of fulfilling contractual obligations
    - threat of competition
    - government intervention
  - i. Physical and mental fitness and age of working pilots.
  - j. Unpredictability of shipping schedules and abuse of pilot resources.
2. The consequences of fatigue in marine pilotage:
  - a. Threat to the marine environment.
  - b. Economic risk to the community.
  - c. Threat to public life.
  - d. Correlation of stress levels and pilot morbidity with workload.

3. Initiatives by SSP to address causes and effects of fatigue:
  - a. The Roster was monitored using a quantitative model.
  - b. An alternative roster was developed and assessed by the Centre for Sleep Research at Uni of SA.
  - c. Resources have been allocated to develop a fatigue management plan.
  - d. Management established code of Conduct.
  - e. Retiring age of 61
  - f. Allocation of resources to build better facilities
  - g. Implementation of an OH&S Management System.
  
4. Ways of achieving greater responsibility by individuals, companies and governments to reduce the problems related to fatigue in transport:
  - a. Fostering of a cultural awareness to the consequences of fatigue
  - b. Education in management of personnel' off duty hours.
  - c. Accountability for a breach of a fatigue management plan
  - d. Minimise the anticipatory stage by more accurate bookings of ships
  - e. Benchmarking across all pilotage organisations
  - f. Tripartism approach by govt, industry and pilots
  - g. National Fatigue Management plan to be established through the Australian Marine Pilots Association (AMPA)

Various detailed studies have been undertaken to assess fatigue levels on the marine pilot. The more detailed being –

Patricia Shipley – A Human Factors Study of Marine Pilotage  
Birbeck College 1978

Dr Yossi Berger – Port Philip Sea Pilots:an Occupation at Risk  
La Trobe University. Melbourne 1984

SSP has been involved with Dr Drew Dawson from the Centre for Sleep Research at Queen Elizabeth Hospital, Woodville South Australia during the past 12 months. Whilst instigating a change in our work roster the biggest hurdle was fostering a culture of fatigue awareness. Further education programs will be addressed to tackle such issues as sleep inertia, commuting, fatigue-related illness and weather conditions, and where possible families will be involved.

Pilotage is about risk assessment.

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