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Fatigue Management Procedure



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1 Review / Approval

Function	Name	Position	Signature	Date
Approver	Gerard Forrest	GM HSEW BAI Australia		20/10/2021
Reviewer	Claire Howson	HSEW Delivery Consultant		20/10/2021

2 Version

Version	Date	Name	Reason
1.0	20/10/2021	Claire Howson	New document

3 Introduction

3.1 Purpose

The purpose of this document is to summarise the critical risk exposures and controls that are relevant to fatigue management while supporting the shared prevention and management of such risks.

3.2 Scope

This procedure applies to workers completing work on behalf of BAI Communications Australia. If a worker is subject to another fatigue related procedure or enterprise agreement, they must abide by the controls that are of a higher standard.

3.3 Definitions

Catastrophic Situation	An event/s that has potential for small- and large-scale damage and loss of life. E.g. Natural disaster, terrorist event.
Fit for duty	The physical, mental, and emotional state a person is in which enables them to safely perform assigned tasks.
Shield	BAI Communications Australia's Safety Management platform that is used for incident, action, audit, and deployment management.
Shift	A period of work
Sleep Deficit	A state that is created when a person has not had sufficient sleep
Supervisor	A person responsible for workers, a work group and associated work activities. This could include but is not limited to Site Supervisors, Team Leaders, Area Managers, Engineering Managers or General Managers.
Worker	A person who carries out work in any capacity on behalf of BAI Communications, including any of the following: an employee of BAI Communications, an employee of a contractor or subcontractor engaged by BAI Communications.

3.4 What is Fatigue

Fatigue is an acute or chronic, ongoing state of impairment that is associated with mental and/or physical impacts. It prevents people from functioning optimally as it can impair functions such as communication, following procedures and decision making. Fatigue is more than feeling tired and drowsy, it is a state that occurs when a person's physical and/or mental limits are challenged. Fatigue can occur because of various factors that may be work-related, lifestyle-related or a combination of both.

4 Responsibilities

4.1 Shared Responsibilities

The management of fatigue is considered a shared responsibility between an organisation and its workers. BAI is responsible for providing a safe system of work which includes the development, implementation and management of working time schedules, rosters and the establishment of a safe work environment and work practices. Workers are responsible for ensuring they are fit for duty by considering lifestyle and medical factors that could influence fatigue and managing these appropriately. If for any reason a worker does not feel fit for duty, then they are responsible for reporting the situation to an appropriate person such as a supervisor or manager.

4.2 People Leaders/Supervisors

Supervisors have the authority and responsibility to:

- Schedule work programs that will not place inappropriate levels of fatigue on workers.
- Minimise work between 22:00 and 06:00 hours where possible. Consider if work can be completed outside of these hours.
- Ensure risk assessments are carried out where fatigue levels have a possibility of affecting the safe conduct of work.
- Regularly review the number of hours of work workers are completing.
- Where additional hours have resulted in incurring Time Off In Lieu (TOIL), ensure TOIL is scheduled to be taken as soon as reasonably practicable to promote adequate rest and recovery after working additional hours.
- Manage repeated instances of fatigue conditions, investigate appropriately, and provide resources and mitigations where needed.
- Implement and manage fatigue risk controls.
- Ensure all new and current workers undergo fatigue education and awareness training.
- Consider organising additional resources or plan to complete the work the following day if a shift continues past scheduled shift duration.

4.3 Workers

Workers must:

- Report to their supervisor or manager if they feel symptoms of fatigue. Workers are also strongly encouraged to report fatigue and any excessive working hours/rosters into Shield.
- Regularly review their hours of work on a daily and weekly basis.
- Requesting additional resources, or plan to complete the work the following day if a shift continues past scheduled shift duration.
- Perform the relevant risk assessment identifying fatigue or the potential for fatigue and applying the relevant controls.
- Follow up with ongoing monitoring and awareness with respect to fatigue management.
- Be aware that they have the right to question what they consider to be unreasonable demands, deadlines or travel requirements.
- Advise any workmate who exhibits signs of fatigue of their concern for their welfare and take reasonable care to ensure their safety.
- Not put themselves or others at risk by not maintaining adequate fatigue management practices as outlined in this Procedure.
- Participate in periodic fatigue education and awareness training.

4.4 General Manager HSEW

The General Manager HSEW has the authority and responsibility to:

- Promote safe practices in relation to fatigue and work conditions.
- Review and monitor this procedure at a frequency specified in the BAI Document Control procedure (add link).
- Provide and verify that workers and supervisors have appropriate training and risk assessment resources to ensure sufficient awareness and education is available to comply with this document.
- Support Supervisors in meeting the requirements of fatigue management.
- Schedule periodic assurance of this Procedure. See 5.8 Assurance and Review.

4.5 Business Units General Managers

The General Manager of Business Units has the authority and responsibility to:

- Promote safe practices in relation to fatigue and work conditions.
- Provide support and appropriate resources to Workers and Supervisors to enable them to comply with this Fatigue Procedure.

4.6 Assigners of After-hours Work (i.e. SMC/NOCC operations)

When assigning after-hours work the following steps must be followed:

- Minimise call out responses/planned work activities between 22:00 and 06:00 hours. Consider if work can be completed outside of these hours.
- If an eight-hour break (or break period as stated in applicable Enterprise Agreement (EA)) has not been achieved prior to the commencement of after-hours work, an initial fatigue risk assessment must be completed by the Worker.
- If the work cannot be completed in a way that allows the worker to arrive home or to accommodation before 14 hours of continuous work are reached, then they should consider alternate means to complete the task whilst still complying with the procedure. Options include:
 - Seek other resources to take over the task
 - Make safe and return to complete after taking an appropriate break

4.7 Contractors

Contractors and subcontractors working for or on behalf of BAI are expected to comply with this Fatigue Management procedure unless controls in their own policy are to a higher standard.

BAI may seek written assurance of the contractor's fatigue management controls at any time during the term of engagement, in accordance with the conditions of engagement.

5 Fatigue Management System and Procedures

5.1 Fatigue Risk Management Framework

Fatigue risk management is about managing sleep, the time spent awake, and the type of work performed. It is a shared responsibility between BAI and its workers. The level of control adopted by workers should reflect the level of fatigue risk exposure.

Sleep is the most effective long-term strategy to prevent and manage fatigue. The most beneficial sleep is in a single continuous period once per 24-hour period. The optimum amount of sleep varies for each person; however, an adult generally requires seven to eight or more hours of sleep daily. When individuals get less sleep than they need in a day, they build up a sleep deficit, which accumulates until they can get enough sleep to offset the sleep deficit. Each additional day without enough sleep increases the deficit. It may take several days before a person recovers adequately from a sleep deficit.

5.2 Risk Management

A recognised risk methodology will be used by all BAI workers to assist in the evaluation and management of fatigue risks. Work related risk factors must be addressed.

The risk assessment process is a systematic guide that assists in identifying and managing workplace fatigue. The four steps to manage the risks of fatigue are:

- identify the hazards that can contribute to fatigue
- assess the risks of these hazards
- implement and maintain risk control measures
- review the effectiveness of the control measures

5.3 Fatigue Risk Factors

When conducting work, the following factors should be considered:

- Time of day
- Prior sleep and time spent awake– the amount of sleep workers have had prior to work and the duration of their work period
- Working without a rest break, including when working to meet critical deadlines and emergency situations
- Sleep patterns affected by frequent call outs over a limited period or extended hours of work

- Inadequate recovery from interrupted or poor-quality sleep
- Working successive shifts, frequently on call out, and regular emergency work outside standard work hours
- Extended shift work and rostering arrangements with early starts or late finishes over successive days
- Length of work periods
- Emergency Works
- Work tasks/activities requiring high mental concentration or high levels of muscular exertion for extended periods
- Tedious and monotonous work
- Heavy or exhausting physical activity
- Long periods of travel, including driving and flying
- Working in high-risk situations or in high heat, cold temperatures, or humid conditions
- Non-work-related factors including but not limited to grief, illness, medication, family commitments, etc,
- Sleep inertia – drowsiness after being woken such as during on-call emergency work

5.4 Fatigue Risk Controls

5.4.1 “Planning” controls

Control Measures that should be considered/used during the **planning stage** of a task

Categories	Examples of controls
Operational Capacity & Geography	<ul style="list-style-type: none"> • Identifying and building operational resilience in workforce and contractor base (i.e. identifying local FIMS and resources where practical) • Proximity of workers residence or accommodation • Supporting Working from Home (to negate driving)
Activity	<ul style="list-style-type: none"> • Contingency plans if workers become fatigued – this would involve removing fatigued workers from work activities where there is a considerable risk to health and/or safety (E.g., operating heavy machinery or plant) • Reducing the duration of exposure to fatigue • Reduce consecutive night work periods – Also see 5.5.1 Limits on Working Hours, • Consider travel time when planning tasks and recovery • Introduce job rotation to limit build-up of mental and physical fatigue and for repetitive or monotonous work, or work that involves heavy physical demands • Planning to ensure work activities/tasks do not last longer than 9 hours, where possible • Consider occupational exposure levels – extended exposure on longer shifts to noise, dusts, chemicals • Minimise strenuous manual tasks – forces used to push, pull, lift, carry, reach or dexterity required for work and ergonomics – body position and location – confined or cramped workspaces
Sites and Facilities	<ul style="list-style-type: none"> • Providing beds/sleeping facilities at strategic sites (i.e. with long travel times to access)
System Design	<ul style="list-style-type: none"> • Design of warning and escalation systems should minimise unnecessarily waking persons (i.e. notifications and escalations after-hours should be valid and screening systems utilising 24hr operations should be utilised where possible)
Worker	<ul style="list-style-type: none"> • Providing training and awareness sessions relating to fatigue risk factors and controls • Annual leave – It is recommended that workers take at least one consecutive two-week period of annual leave each year, or pro rata of this amount for part-time workers.

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|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none"> • Supporting workers to seek assessment and medical treatment of sleep disorders • Any special non-work-related characteristics of the people involved – for example if a worker is on medication, family commitments, etc |
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5.4.2 Operational controls

Control Measures that should be considered/used during a shift, or if a shift continues past scheduled shift duration:

- **Contingency plans** if workers become fatigued – this would involve removing fatigued workers from work activities where there is a considerable risk to health and/or safety (E.g., operating heavy machinery or plant)
- Ability to **access food and refreshments** for a balanced diet
- Allowing people to **work from home** or **utilising taxis** to negate driving when fatigued
- Contact your supervisor as soon as practical if feeling fatigued
- Use of **fatigue monitoring tools** i.e. sleep tracking/fatigue tracking
- Use of the **Fatigue Self-Assessment**
- Adequate **food and hydration** to maintain energy levels
- Review the need for **rest periods and/or rotation of tasks**
- Make safe and return to complete the next morning)
- Seek other resources to continue the task

5.5 Scheduling

Scheduling of work should be proactive and must comply with this procedure. In all scheduling the following matters must be considered, but are not limited to:

- time of day
- nature of work and the level of inherent risk relating to the work
- number of people
- start and finish times
- duration of work and tasks
- frequency of breaks
- travel times
- opportunity to recover from fatigue
- redesign work practices or rescheduling high risk/complex tasks; and
- the need to conduct a formal risk assessment

Job rescheduling is necessary when there is a risk to a worker's health & safety, plant or equipment if performing hazardous/critical work during the high fatigue periods, E.g. between 22:00 and 06:00 hours

5.5.1 Limits on working hours

Risk assessing the hours of work and proactively addressing fatigue with controls through upfront planning will mitigate the risk of fatigue for workers.

Supervisors must monitor their workers to ensure they do not become so fatigued as to adversely affect the health and safety of themselves or others. The following *limits*¹ have been placed on working hours to minimise the risk of fatigue.

- Maximum of **14 hours worked in any 24-hour period**
- Maximum of **24 hours worked in a 48-hour period**

¹ Source: Safe Work Australia's Managing the Risk of Fatigue (2013).

- Maximum **72 hours in any 7-day** period
- Maximum of **13 consecutive days** work
- Maximum of **4 consecutive night shifts**
- Minimum **8-hour break, or minimum break period stated in applicable EA**, to be taken between the end of a *shift*² and the beginning of another*

Where it is necessary for work activities to continue beyond the above limits... Examples: Adhoc requests, unexpected fault response	a <i>Fatigue Self-Assessment</i> must be completed to help assess whether work can continue safely. See 5.6.1 Fatigue Self-Assessment tool.
Where a regular shift pattern is expected to not comply with the above limits...	a formal risk assessment must be completed. See 5.6.2 Risk Assessment of non-compliant shift pattern
* Where there are broken work patterns due to on-call/fault response, or afterhours works and the shift is not clear...	the minimum break period may be split over a maximum of two periods in a 24-hour period. It still stands that a <i>Fatigue Self-Assessment</i> must be completed prior to commencing work in this situation.



No worker is permitted to work beyond 17 hours in a 24-hour period, even if a risk assessment is completed

5.5.2 Scheduling in Remote Areas

In areas (particularly in more remote areas) where travel times may be extensive, supervisors must develop and implement appropriate local contingency plans or initiatives to ensure that excessive hours are not worked. These may include but are not limited to:

- Plan work duration so that workers can be home (or suitable place of rest) within a 14-hour timeframe, or as defined by applicable EA if possible
- Make suitable arrangements for travel to the nearest accommodation
- Consider providing camping gear in remote area(s)
- Arrange other workers either locally or from other areas to take over, prior to 14-hour timeframe, or as defined by applicable EA being worked straight

It is the responsibility of Supervisors in periods of high activity to manage resource allocation and work activity to ensure that excessive hours are not worked, and adequate resources are available to manage workloads.

5.5.3 Scheduling in Catastrophic Situations

In situations of potential catastrophic impact, work and travel times may be extensive.

Supervisors must develop and implement appropriate contingency plans or initiatives to ensure that excessive hours are not worked. These may include but are not limited to:

- Plan work duration so that workers can be home (or suitable place of rest) within a 14-hour timeframe, or as defined by applicable EA if possible
- Make suitable arrangements for safe travel to the nearest accommodation
- Arrange other workers either locally or from other areas to take over, prior to 14-hour timeframe, or as defined by applicable EA being worked straight

² a *shift* includes travel times in the field when driving or as a passenger in a motor vehicle.



It is the responsibility of Supervisors in periods of high activity to manage resource allocation and work activity to ensure that excessive hours are not worked, and adequate resources are available to manage workloads.

5.6 Fatigue Risk Assessment

5.6.1 Fatigue Self-Assessments

If there are occasions where it is necessary for work activities to continue beyond the working limits stated in 5.5.1 Limits on Working Hours, a *Fatigue Self-Assessment* must be completed to help assess whether work can continue safely.

This is completed in the form of the [Test Your Tired Self](#) app developed by Transport for NSW which is available for all workers to access via their mobile phones.



The *Fatigue Self-Assessment* is designed to promote self-awareness and assist and support the decision-making process with the worker's supervisor.

It **should not** be considered definitive. Above all, the Fatigue Self-Assessment should be considered *a tool*, and *not a rule*.

The final decision on whether a worker continues or stops work is to be made by the supervisor.

5.6.2 Risk Assessment of non-compliant shift pattern

If a regular shift pattern that does not comply with the limits set out in [5.5.1 Limits on Working Hours](#), but is found to be operationally necessary, a formal risk assessment using a recognised risk methodology may be completed.

The *risk assessment* shall:

- assess the hours and days of continuous work, types of work activities, rest periods, and controls to ensure workers' health and safety.
- be completed in consultation with the Supervisor, the Business Unit General Manager and the HSEW General Manager.

External subject matter expertise may be required and can be facilitated by the HSE Team.

5.7 Training

Workers will be provided with training and support on coping strategies to deal with fatigue and any related issues. Fatigue training should include:

- Risks of fatigue (safety, wellbeing)
- How to identify fatigue in themselves and in colleagues
- Strategies for managing fatigue

This training will be available through Learn Central (BAI employees) and Appian (Contractors and FIMs) and should be completed periodically.

5.8 Assurance and Review

This procedure shall be reviewed every two years or as required by the General Manager HSEW. The review should determine effectiveness, functionality, compliance to the requirements and other internally related documents/materials/practices using an auditing approach. The review will incorporate:

- Interviews with personnel
- A desktop audit of documentation and practices
- Quantitative analysis of internal systems using rules set out in 5.5.1 (databases, safety records, investigations etc.)
- Review of the work schedules and the extent to which overtime is used

Following the initial review, each subsequent review of this procedure will be undertaken no less frequently than once every two years, or at other times as required by changes to the relevant legislation or for the improvement of this fatigue procedure.

BAI will ensure that fatigue related issues are considered in the reporting and investigation of incidents. This procedure is stored on the BAI Procedure Portal.

6 Appendix A. Scenarios

Scenario 1. On-call Technician

Description: A technician who is on-call has worked a shift from 8am to 4pm and has received a call to attend a fault on site at 10pm, for a duration of two hours.

Possible controls:

- Complete Fatigue Self-Assessment and discuss with supervisor/assigner of afterhours work prior to leaving home.
- Consider whether work be done the next day.
- Start later the next day to ensure technician has adequate rest period.

Scenario 2. Office based worker required to complete high priority report

Description: An office-based worker has been tasked with completing an urgent, high priority task that is expected to take longer than 14 hours to complete.

Possible controls:

- Complete Fatigue Self-Assessment and discuss with supervisor about possible date extension for task
- Work from home to remove the need for driving late
- Start later the next day to ensure worker has adequate rest period

Scenario 3. Project team conducting extended upgrade works

Description: An on-site project team have been conducting upgrade works and found the project will take 16 days, instead of 12.

Possible controls:

- Take a day off between Day 7-10 to ensure on-site project team have adequate rest
- Complete Fatigue Self-Assessment and discuss with supervisor about crew's physical and mental fatigue levels.