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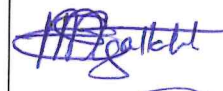
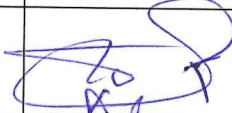
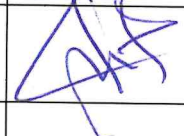
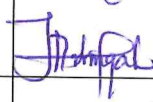
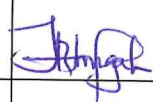
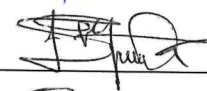

# FATIGUE MANAGEMENT PLAN


**TNCL-OHS-PLN-0004**

TEMBO NICKEL CORPORATION LIMITED  
 19 AUG 2023  
 DOCUMENT CONTROL

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## 1. PURPOSE

The purpose of the Fatigue Management Plan is to provide a systematic approach to understanding and controlling the risks associated with fatigue and outlines the TNCL commitment to managing fatigue for all employees and contractors. More specifically, the plan seeks to ensure:

- a) All personnel understand fatigue is one of the components of an overall approach to fitness for work and the need to be fit for work.
- b) To eliminate or otherwise minimize the risk of fatigue on employees and the operation through awareness, assessment, and control of contributing hazards.
- c) There is continual maintenance of a safe working environment and operations by minimizing hazards associated with fatigue.
- d) TNCL meets its obligations to its employees, contract partners, and the general community by carrying out its operations safely.

The plan identifies and targets specific risk factors and control measures involved within the scope of works related to all TNCL operations.

## 2. SCOPE

This plan outlines the requirements for fatigue management on site. It also provides all employees and contract partners with information on personal risk management of fatigue and guidelines for recognizing fatigue and managing fatigue-related risks at work. This plan applies to all TNCL personnel and contract partners.

## 3. WHAT IS FATIGUE


Fatigue is more than feeling tired and drowsy. In a work context, fatigue is a mental or physical condition that reduces a person's ability to work safely and effectively. It has many causes and can occur because of prolonged mental or physical activity, sleep loss, and/or disruption of the internal body clock.

Fatigue can be caused by factors, which may be work-related, non-work related, or a combination of both and can accumulate over time.

Fatigue can adversely affect the safety of the workplace as it reduces alertness, which may lead to errors and an increase in the occurrence of incidents and injuries.

## 4. DUTY OF CARE

TNCL management recognizes that fatigue is a potential health and safety risk factor, which needs to be managed and controlled as part of the duty of care responsibilities of the employer and the employee.

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## 5. ABBREVIATION


Table: 1

Term	Description
<b>TNCL</b>	Tembo Nickel Cooperation Limited
<b>OHS</b>	Occupational Health and Safety
<b>ELRA</b>	Employment and Labour Relations Act
<b>NWR</b>	Non-Work Related
<b>SOP</b>	Standard Operating Procedure
<b>FFW</b>	Fit for Work
<b>EAP</b>	Employee Assistance Program
<b>NWR</b>	Non-work related
<b>DSS</b>	Drivers / Operator Safety System

## 6. DEFINITIONS

Table: 2

Term	Description
<b>Very High Safety Critical tasks</b>	<p>Activities of which will require the employee's concentration and attention all the time, and should the incident, the likelihood of causing fatality or significant equipment damage is high. These include but are not limited to:</p> <ol style="list-style-type: none"> <li>1. Heavy equipment operators</li> <li>2. Machine operators</li> </ol>
<b>TNCL Employee</b>	Any person with an employment contract with TNCL working for wages or salary.
<b>Medical Examination</b>	<ul style="list-style-type: none"> <li>• Includes the medical test and evaluation administered by a healthcare provider:</li> <li>• The initial medical examination is the examination that is administered after employment but prior to initiating work that might be reasonably anticipated to cause occupational exposure to a potential hazard.</li> <li>• A periodic medical examination is an examination that is administered annually.</li> <li>• Placement medical; is an examination that will place an employee from one exposure group to another.</li> <li>• Exit medical examination is the examination that is administered at the time of termination of employment or at the time the employee is no longer occupationally exposed to the potential hazard.</li> </ul>
<b>Primary prevention</b>	<ul style="list-style-type: none"> <li>• Is taking action to prevent the initiation of a disease process by removing or reducing risk factors for disease in a target population. Actions may follow the hierarchy of control principles.</li> </ul>


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<b>Shift Work</b>	Shift work is work that is outside of normal hours (06:00 to 19:00); and/or shift lengths greater than 9 hours.
<b>Shift Worker</b>	A shift worker is anyone who works shift work.
<b>Fitness for Work</b>	An employee (including contract partner employee) is in a condition (physical, mental, and emotional), that enables the employee to carry out their assigned tasks competently, and in a manner that does not threaten the safety or health of themselves or others in the workplace. The final determination of 'Fit for Work' is based on the opinion of the principal employer, manager, superintendent, and individual.
<b>Employee Assistance Program(EAP)</b>	A program incorporating established procedures for the referral to specialist counseling services of employees with personal problems, which may impact job performance and safety.
<b>Supervisor</b>	The person at any level of the organization to whom others report on a day-to-day basis regarding work-related issues, and who may have responsibilities for the allocation of tasks and/or supervision of others. This includes (but is not limited to) area coordinators, forepersons, superintendents, and departmental managers.
<b>Travel Time</b>	Includes time taken to commute to and from the place of work, traveling between sites, or any business travel undertaken including national and international flights.
<b>Shift Time</b>	Total time scheduled to be spent in the workplace including short breaks, scheduled breaks handover /shift change meetings, and active work (does not include time spent traveling to and from work).
<b>Night Shift</b>	Any shift that includes work between the hours of 20:00 and 06:00.
<b>Working Time</b>	Total time spent at work (including travel time), including shift time and any overtime or additional time worked.
<b>Non-Working Time</b>	A time when workers are off-site, away from their usual work-related tasks.
<b>Active Work</b>	Time spent performing duties in the workplace (not including short breaks or scheduled breaks).
<b>Short Break – (Fatigue Break)</b>	Is a break from active work, which can include toilet stops, checking equipment, rest, and refreshment, not necessarily taken at the crib room
<b>Scheduled Break</b>	A break scheduled from active work where go to areas set aside for the consumption of meals, rest, refreshments, etc.
<b>Sleep Inertia</b>	The feeling of loss of orientation or grogginess when an individual awakens from a deep sleep.

## 7. LEGISLATIONS

The Tanzania Occupational Health and Safety Act, 2003 instructs the employer to ensure the workplace is safe and healthy for all employees. Also, it requires the employers to ensure that the employees are assessed for their medical fitness for work. Fatigue is one of the outcomes of workplace exposures that must be properly managed.

The Tanzanian Labor and Employment Act requires the employer to ensure that no employee will be

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allowed to work in night shift until they are declared FIT for duty by the registered medical practitioner. Also, to manage fatigue, the Act put in place the limited hours that the employee can work overtime and also provides guides on the shift work.

The details of the fitness for work for all employees, including the night work, are defined in the medical incapacity procedures (TNCL-OHS-SOP-0016) and the medical surveillance program (TNCL-OHS-SOP-0038)

## 8. PROGRAM COST

The fatigue management program will be financed by the general manager budget for the Tembo Nickel employees. For the contractors, the cost of the program will be covered by the site manager.

## 9. ROSTER REQUIREMENT

Rosters worked at the TNCL require the approval of General Manager or designate and shall be based on consideration of the following criteria and their effects on employees and business partners:

Length of shifts and the number of hours worked, including overtime.

- a) The roster cycle and the number of consecutive days of work and recovery.
- b) The work shift starts and finishes times, and the number and length of break periods.
- c) The flight times for fly-in/fly-out.
- d) The tasks performed during the shift (physical/mental demands).
- e) Workplace conditions (heat, humidity, noise, vibration, chemicals, dust).
- f) Social and lifestyle factors.

In circumstances where there is a genuine need for a roster to be worked that does not comply with the maximum hours of work, this shall be subject to a formal risk assessment.

The risk assessment shall identify controls to be implemented to adequately manage the risk of fatigue. The risk assessment shall be reviewed and signed off by the site safety manager or delegate.

The roster shall only commence after approval has been received.

### 9.1 Shift Rostering Legal Requirements as Set Out in the Tanzania Labour Law (Nationals)

The Tanzania employment and labor law sets the legal working week at 45 hours per week (article 19-(1) (b)). Additional overtime can be accumulated per week to a maximum of 15 overtime hours.


**Note:**

For all questions and concerns regarding the work hours or rostering of national personnel contact the Human Resources (HR) department directly for assistance.


## 10. ROLES AND RESPONSIBILITIES

Table: 3

Position	Responsibilities
General Manager	Provide the resources to implement the requirements of this plan at TNCL. <ul style="list-style-type: none"> <li>• Approve new roster rotations as required</li> </ul>

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OHS Manager	<p>Develop and maintain assurance processes and practices to monitor the implementation and management of the requirements of this plan and ensure this procedure is reviewed every two years from the date of the last issue.</p> <ul style="list-style-type: none"> <li>Establish appropriate procedures and facilities to ensure that sensitive medical and other personal information is safeguarded as required by this procedure.</li> <li>Approve shift extensions over 14 hours as required</li> </ul>
Department Manager	<p>The department manager, in their capacity, has the overall responsibility for the implementation and review of the plan within their area of responsibility. Further to this, the department manager shall ensure:</p> <ul style="list-style-type: none"> <li>Fatigue Management training that provides information on the risks associated with fatigue and the tools/methods available to control these risks is available for all employees and business partners.</li> <li>Information for support and counseling services is available.</li> <li>Employees are informed of the hours worked by all individuals on-site and are monitored to prevent excessive time being worked.</li> <li>Supervisors and managers receive the appropriate training in understanding and managing fatigue.</li> <li>Workplace conditions that demonstrably contribute to fatigue (such as noise, excessive vibrations, and hazardous substances) are appropriately managed.</li> <li>The application and effectiveness of this guideline and its associated measures are regularly monitored.</li> <li>Individuals who seek assistance in fatigue management will not be disadvantaged and their employment rights will be safeguarded</li> </ul>
Area Superintendents / Leads	<p>Department superintendents / Leads are responsible for assisting with the implementation, monitoring, and compliance of direct reports to the fatigue management plan in operations conducted by TNCL whilst on duty, and within their area of responsibility.</p> <ul style="list-style-type: none"> <li>Ensure that adequate resources are allocated for the education, training, counseling, and other requirements of this procedure.</li> <li>Approve shift extension up to 14 hours.</li> <li>Ensure that individuals who seek assistance will not be disadvantaged and that all employment rights will be safeguarded.</li> <li>Take prompt and appropriate action whenever they believe an individual is not capable of working in a safe and effective manner, including traveling to their place of residence safely.</li> <li>Ensure the provision of appropriate education and training resources.</li> <li>Assess, or arrange for assessment by others, the fitness for work of individuals under their control, when required.</li> <li>Ensure that all information is dealt with in the strictest confidence</li> </ul>

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<b>Supervisors</b>	<p>Supervisors shall be responsible for:</p> <ul style="list-style-type: none"> <li>• The management of this plan in a way that encourages individuals to bring up concerns about their own or other individuals' level of fatigue and other issues that may impair their fitness for work.</li> <li>• Assessing the fatigue levels and fitness for work of individuals under their control, at the start of and throughout the work cycle.</li> <li>• Taking prompt and appropriate action whenever they believe an individual is fatigued and not capable of working in a safe and effective manner.</li> <li>• Ensuring that all practical steps are taken to minimize fatigue and its effects on the workforce or individual.</li> <li>• To ensure that sensitive medical and other personal information with respect to this guideline is kept confidential.</li> <li>• To complete Fatigue Observation Checklist where individuals' behavior suggests fatigue and for all employees completing exceed days on site</li> </ul>
<b>Employees, Business Partners, and Visitors</b>	<p>All personnel are responsible to ensure the requirements of the plan are met and shall comply with the provisions of the fatigue management plan whenever they are on site. Further to this, all personnel shall be responsible for:</p> <ul style="list-style-type: none"> <li>• Ensuring their personal fitness for work at the commencement of every shift.</li> <li>• Present to work in a condition in which they can carry out their duties without risk to themselves or others (including ensuring that they are not in an unfit state for any reason including the adverse effects of fatigue, altered emotional states, alcohol or drugs)</li> <li>• Notifying their immediate Supervisor of any concerns about or potential impairment of their fitness for work due to fatigue or any other issue.</li> <li>• Notifying the company of any commitments (other jobs, hobbies, study, excessive commuting time, etc.) which may cause them to be fatigued.</li> <li>• Informing their supervisor if, at any time during the shift, they become too fatigued to work safely.</li> <li>• Informing their immediate supervisor of any illness that may affect their ability to perform their duties safely.</li> <li>• Ensuring that any prescription or non-prescription medication that could cause fatigue is taken in accordance with dosage directions and notification has been given to the supervisor/site medical staff of the medication being taken.</li> <li>• Co-operate and participate in alcohol or drug testing.</li> <li>• Assess their personal fitness for work at the end of the shift to ensure fitness to commute home</li> </ul>


## 11. MANAGEMENT OF FATIGUE RISKS

Measures to manage the risks associated with fatigue will vary from one workplace to the next, depending on the nature of the work, environmental conditions, and individual factors.

### 11.1 Causes of Fatigue

The causes of fatigue are grouped into the following categories:

- a) Inadequate sleep

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- b) Workplace factors
- c) Personal factors

### 11.2 Symptoms and Signs of Fatigue - Factors

- a) weariness,
- b) tiredness,
- c) sleepiness, including falling asleep against your will ("micro" sleep),
- d) irritability,
- e) reduced alertness, concentration, and memory,
- f) reduced ability to be productive,
- g) mentally tired,
- h) physically tired,
- i) lack of motivation,
- j) depression,
- k) boredom,
- l) giddiness,
- m) headaches,
- n) loss of appetite,
- o) digestive problems, and
- p) increased susceptibility to illness

### 11.3 Symptoms and Signs of Fatigue - Actions

- a) reduced decision-making ability or cognitive processing,
- b) reduced ability to do complex planning,
- c) reduced communication skills,
- d) reduced productivity or performance,
- e) reduced alertness, attention, and vigilance,
- f) reduced ability to handle stress on the job,
- g) reduced reaction time - both in speed or thought, as well as the ability to react,
- h) loss of memory or the ability to recall details,
- i) failure to respond to changes in surroundings or information provided,
- j) unable to stay awake (e.g., falling asleep while operating machinery or driving a vehicle),
- k) increased tendency for risk-taking,
- l) reduced physical capacity,
- m) reduced performance, such as a reduced ability to do a task or job
- n) increased forgetfulness,
- o) increased errors in judgment,
- p) increased sick time, absenteeism, rate of turnover,
- q) increased medical costs, and
- r) increased incident rates.

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#### 11.4 Fatigue Related Hazards

All reasonable steps shall be taken to control the following fatigue-related hazards. Controls shall include, but not be limited to

- a) Working hours shall be defined and enforced by department managers.
- b) Shutdown and commissioning work must be planned to consider fatigue issues.
- c) Employees and business partners shall notify their supervisor if affected by symptoms of fatigue.
- d) Whenever it is intended that a shift be extended beyond an individual's usual shift or roster length, extra breaks shall be scheduled into the extended period.
- e) Except in cases of emergency, employees and business partners shall be provided with sufficient notice to prepare for changes to rosters and working periods.
- f) Employees, business partners, and supervisors shall be provided with education to assist in the management of fatigue at work and outside work.
- g) Supervisors shall have the flexibility to effectively manage their employees' working time in a way that allows them to combat fatigue.
- h) Where requested by employees and business partners, journey management plans shall be developed to assist personnel who have extended travel commitments

#### 11.5 Fatigue Management Techniques

Management of fatigue shall be based on constructive relationships with all individuals. Fatigue shall be managed at the following levels and in the following order:

- a) Self-Management.
- b) Peer Management.
- c) Supervisor Management.


#### 11.6 Self-Management

Self-management places responsibility on the individual for ensuring that they effectively manage their personal fatigue levels and be 'fit for work'. Employees must be supported by education and awareness programs to ensure they understand workplace fatigue (signs and symptoms) and the tools and controls available.

Access to the employee assistance program is available for all employees and their immediate families to assist with issues that may adversely affect an individual's fatigue levels in the workplace.

An employee or business partner shall immediately advise their supervisor of any circumstances where they are suffering the effects of fatigue. This shall include any fatigue concerns (including extended travel time to work, sleeping disorders, and medications that may cause drowsiness or fatigue). The individual and their supervisor shall have a discussion to determine appropriate control strategies to manage that person's fatigue.

- a) Self-management is by far the most effective control for fatigue because responsibility is with the person who is most able to control fatigue. Self-management shall be focused on fatigue management training and developing our people to the point where they can effectively understand and manage their own fatigue.

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- b) Individuals shall ensure that they obtain adequate sleep to prevent fatigue. This is especially important for shift workers who should actively plan to obtain adequate rest.
- c) Individuals shall inform their supervisor if they consider there is a possibility that they may present a risk to themselves or other individuals.
- d) Individuals should take all reasonable steps to ensure that they do not present to work in a fatigued state.
- e) Individuals shall exercise particular care to prevent fatigue at critical times such as a change in roster or when returning from a period of leave.
- f) Access to the Employee Assistance Program (EAP) shall be available for all employees and their immediate families. In addition, the FFW referral process provides management strategies for fatigue and other fitness-for-work risks if required.
- g) Employees and business partners shall advise their supervisor of anything that they are aware of that may affect their fitness for work. This includes any fatigue concerns, including extended travel time to work, sleeping disorders, and medications that may cause drowsiness or fatigue.

### 11.7 Peer-Management


Each employee has a duty of care to identify and control hazards in the workplace, including fatigue-related hazards. Any employee having a concern that another employee is showing signs of fatigue shall approach and discuss this with the individual. If the concern cannot be resolved, then it shall be raised to the relevant supervisor by either party. The onus of responsibility shall rest with the individual who raised the concern to ensure that the supervisor has been advised.

If the concern cannot be resolved, it shall be reported to the relevant supervisor by either party. The onus of responsibility shall rest with the individual who raised the concern to ensure that the supervisor has been advised.

### 11.8 Supervisor Management

Supervisor management shall also be used to support and enhance the implementation of self-management and peer support. Supervisors shall be trained to understand fitness for work indicators and implementation of control strategies.

- a) Supervisor to assess any personnel who report that they are fatigued during their shift and take appropriate action to manage their fatigue.
- b) Supervisor management shall also be utilized to support and enhance the implementation of self-management and peer management. Supervisors shall be trained to understand fatigue indicators and implementation of control strategies.
- c) Supervisors should utilize the tools included in this plan to assist in fatigue identification, discussions with individuals, risk assessment, and implementation of control actions, including the use of the FFW referral process to develop practical work plans, as required.
- d) If an individual has ongoing or regularly repeated issues with fatigue, the supervisor shall consider the use of the FFW referral program in consultation with site human resources and health teams.

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### 11.9 Managing Fatigue

All reasonable steps shall be taken to control fatigue-related hazards. Controls shall include (but are not limited to):


- a) Working hour limits shall be defined and enforced.
- b) Employees shall notify their supervisor if affected by symptoms of fatigue.
- c) Whenever it is intended that a shift be extended beyond an individual's usual shift length, extra breaks shall be scheduled into the extended period.
- d) Except in cases of emergency or operational necessity, employees shall be provided with sufficient notice to prepare for changes to rosters.
  - o 3 days for a temporary roster change.
  - o 4 weeks for a permanent roster change.
- e) Except in cases of emergency, employees shall be provided with sufficient notice to prepare for a working time of 14 hours or more.
- f) Irregular or unfamiliar work rosters should be minimized.
- g) Employees and supervisors shall be provided with education to assist awareness for the promotion of the management of fatigue at work and outside work.
- h) Supervision shall have the flexibility to effectively manage their employees' working time in a way that allows them to combat fatigue.
- i) Personnel shall not work outside agreed schedules for periods that may expose the individual and others to unacceptable levels of risk or put at risk the safe completion of the tasks they are conducting.
- j) Assessing prospective employees' fitness for the tasks and work cycle (i.e., a comprehensive pre-employment medical assessment that would identify risks associated with an employee's suitability to work in a shift work arrangement).
- k) Inclusion of sleep disorder screening shall be included in health surveillance programs for safety-critical workers (e.g., mobile equipment operators)
- l) Where possible, personnel returning to work after leave or extended absences should be placed on a day shift roster prior to commencing on the night shift.

### 11.10 Pre-shift Assessment

Pre-shift assessment of employees for fatigue-related hazards should be conducted with the shift supervisor before work commences, and excess drug and alcohol levels should be conducted on a regular basis according to TNCL's fitness for work policy. Ideally, testing should be done randomly, before the commencement of the shift. High-risk shifts should take precedence (. e.g., night shifts) over lower-risk shifts (. e.g., early morning start).

### 11.11 Case Managing Fitness for Work Issues

The management of individuals demonstrating ongoing fatigue and alertness impairment issues shall be managed according to the management of non-work related (NWR) conditions and in consultation with the appropriate specialist.

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## 12. WORKING HOURS


### 12.1 Hours of Work Requirements

#### 12.1.1 Expatriate Rosters

- a) The maximum rostered shift time per 24 hours shall not exceed 12 hours, excluding 'shift change'
- b) The maximum time for shift handover shall not exceed 30 minutes. Herein, the planned workday shall be referred to as 12.5.
- c) Persons required to work more than 12.5 hours must obtain approval from their supervisor before commencing. The fatigue assessment tool as seen in 'Appendix 2' should be utilized in the approval process.
- d) Where a person such as managers, supervisors, and professional staff are primarily working in an office (at least 50% by time), the total work hours per day prior to requiring supervisor approval or a risk assessment can be extended to 13 hours.
- e) The maximum working time per 24 hours without risk assessment and departmental manager approval, shall not exceed 14 hours.
- f) Under no circumstances shall working time exceed 14 hours. More frequent breaks shall be included in the extended work period. Any individuals required to work extended hours, shall not work alone.
- g) The maximum average weekly shift time hours in any recognized roster shall not be more than 88 hours
- h) The maximum scheduled continuous roster on site shall not exceed 14 days. Employees shall have a full 24-hour break after 14 days.
- i) Where practicable, rosters which rotate between day and night should rotate forwards (i.e. day shift worked before night shift), including rolling rosters
- j) To ensure personnel has the opportunity for adequate sleep, work hours shall be structured in such a way as to ensure rest periods between shifts are at least 10 hours.
- k) Where personnel are required to change shifts from day to night shift, or night to day shift, they shall be given a 24-hour rest period.
- l) Day shifts shall not start between midnight and 05:00 a.m.

#### 12.1.2 All National Rosters

- a) Legal working time may not, in principle, exceed 45 hours per week.
  - o Shift workers working 12 hours are not to exceed 60 hrs. per week
- b) The maximum rostered shift time per 24 hours shall not exceed 12 hours, including 'shift-change' requirements.
- c) Travel to and from the site shall be considered non-work-related hours.
- d) Persons required to work more than 12 hours must obtain approval from the general manager for a maximum of two (2) hours before commencing. The fatigue assessment tool as seen in 'Appendix B' should be utilized in the approval process.
- e) Under no circumstances shall working time exceed 14 hours. More frequent breaks shall be included in the extended work period. Any individuals required to work extended hours, shall not work alone.

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- f) Urgent work (approved by the general manager) that requires necessary and immediate execution (to prevent the inevitable loss or emergency) must not exceed two (2) hours.
- g) Overtime work must not exceed 14 hours per week.
- h) Weekly rest is compulsory. It is 24 consecutive hours. It takes place, in principle, on Sundays; however, weekly rest can be taken on a day other than Sunday for departments that cannot cease operations without causing substantial inconvenience.
- i) The maximum scheduled continuous roster on site shall not exceed 6 days. Employees shall have a full 24-hour break after 6 days.
- j) Where personnel are required to change shifts from day to night shift, or night to day shift, they shall be given a 24-hour rest period.
- k) Night shift is work carried out between 21:00 hours and 5:00 hours.
- l) Day shifts shall not start between midnight and 05:00 a.m.

**Note:**

For all questions and concerns regarding the work hours or rostering of national personnel contact the Human Resources department directly for assistance.

**12.2 Night Shift**

The maximum number of consecutive night shifts shall not exceed ten (10) shifts unless approval is given by the department and safety manager/s or delegates after conducting a risk assessment.

**12.3 Rest Periods**


- a) There shall be a minimum 60-minute total of rest breaks per workday.
- b) The maximum time worked without a break shall not exceed 5.5 hours. Where breaks cannot be taken within the recommended timeframe, additional controls shall be implemented to ensure that personnel are able to appropriately manage fatigue risks.
- c) Additional appropriate breaks as required shall be provided.
- d) Where practicable, departments are encouraged to explore options that allow personnel to take rest periods when required as opposed to scheduled rest periods.

**12.4 Change Roster**

On occasion, employees will be required to change rosters either in the case of an emergency or operational necessity. Employees shall be provided with sufficient notice to prepare for changes to rosters.

- a) 3 days for a temporary roster change.
- b) 4 weeks for a permanent roster change.

Where there is a genuine requirement for a roster to be worked that does not comply with the notice periods above, formal approval is required from the general manager or delegate

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### 12.5 Extended Shifts, Callouts, and Emergencies

Under certain circumstances such as breakdowns, callouts, or emergency situations, extended working time of more than 12 hours may be necessary. Consideration shall be given to:

- The amount of time that people have been awake.

Managers will establish an 'on-call' roster of employees, where practical, who can respond to 'out of hours' tasks. To manage fatigue, the roster shall ensure adequate management of employees' rest periods is implemented.

Under no circumstances shall an individual work or operate a vehicle after more than 12 hours excluding travel.

### 12.6 Business Travel

On occasions when employees or business partners are required to undertake business travel, working time may exceed 14 hours in a 24-hour period. In these cases, appropriate controls shall be in place including:

- Wherever possible, overnight accommodation arranged to avoid lengthy travel
- Provision of cab charges/alternative transportation to drive to and from the airport to the place of accommodation.
- Ensure the employee is not required to commence a shift without adequate rest time following travel.
- Ensure individuals traveling internationally understand the impact of jet lag and do not attempt to drive or conduct safety-critical tasks whilst affected by jet lag.

## 13. CONTROL MEASURES


### 13.1 High-Risk Tasks

Where an extension of working hours is considered the criticality of the planned work task/s, then the risk of fatigue impacts must be considered. High-risk tasks can include:

- Electrical work.
- Operation of mobile plant and equipment.
- Any task requiring a permit such as working at height or confined space entry, including their supervision of that task.
- Operation of control rooms or similar management systems.
- Any other task deemed from time to time as critical in nature by a department or business partner manager or delegate.

### 13.2 Transportation

Any individual required to work extended hours or having their rest period disrupted by a call-out, shall not be permitted to drive or operate machinery until a ten (10) hour break has been taken. The individual

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shall be driven to and from their accommodation.

### 13.3 Monitoring

Monitoring processes of extended hours shall be undertaken to investigate the cause of their extended hours. Monitoring shall also consider that extended hours are not being continually worked by the same individual(s).

### 13.4 Fatigue Breaks

Fatigue breaks shall be made available for employees when:

- a) Requested, subject to authorization by the supervisor on each occasion.
- b) The supervisor identifies that the employee may be fatigued.

During the fatigue breaks the employee shall remove themselves from active work for a short period of rest and/or refreshment.

When a fatigue break is taken the supervisor shall ensure this is documented.

### 13.5 Short Breaks Option

This may include either an unscheduled or rescheduled meal break, a walk-around inspection of their work area, or a change of environment for a brief period. It may be appropriate that crib breaks are scheduled differently.


### 13.6 Power Nap Option

Rules shall apply to this when used as a preventative measure:

- a) Napping shall take place only with the approval of the immediate supervisor in the appropriately designated area.
- b) The recommended length of napping is no more than 20 minutes. This allows the individual to reach only a light level of sleep and not the deeper sleep which if interrupted can cause disorientation and "grogginess" for some minutes afterwards.
- c) Power napping is one method of coping with shift work particularly in the early hours of the morning when fatigue can be an issue even with people who have adequate rest before their shift. If personnel are allowed to take power naps in mobile equipment a walk-around inspection of the equipment or vehicle shall take place after the nap and before the equipment or vehicle is moved.
- d) The relevant department will identify and establish appropriate facilities where 'napping' can occur. Napping is not permitted underground,
- e) If underground, supervisors must decide for underground operators to be taken to the surface.

#### Note:

The power nap option shall be considered as a last resort control only. If an individual continues to require power naps on a regular basis the supervisor should consult with human resources and health

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teams and consider the option of an FFW referral to support the individual.

## 14. REPORTING FATIGUE-RELATED INCIDENTS AND ISSUES

The following situations shall require an Incident Report to be submitted:

- a) Where a person breaches the maximum 14 hours on-site requirement or not having a 10-hour break between shifts requirement without prior approval
- b) Where there is an actual incident (e.g., injury, equipment damage, near miss) in which fatigue is suspected as a potential factor.

## 15. TRAVEL TIME

### 15.1 National / Local Employees


The maximum working time of 13 hours in a 24-hour period includes time spent traveling to and from work. Any exceptions shall be subject to a risk assessment and shall be subject to approval by the general manager or delegate. Suitable controls shall be implemented and may include (but are not limited to):

- a) Driving the employee to their accommodation after the extended shift.
- b) The inclusion of more frequent breaks into the extended shift period.
- c) Having the employee drive in the night before shift commencement.

### 15.2 Fly-in/Fly-out Arrangement

Some flight patterns may result in the working time exceeding 14 hours. These cases shall be subject to a risk assessment and appropriate controls implemented which may include (but are not limited to): adequate rest breaks during shifts with special consideration to the first and last shift which incorporates commute time.

- a) Where a roster starts on a night shift, ensuring flight arrangements shall be such that individuals can have four (4) hours of sleep before commencing the night shift.
- b) Where a roster starts on a day shift, consideration should be given to the option of flying in the previous night to provide an opportunity for an eight (8) hour sleep. If individuals are required to fly in on the morning before commencing their shift, a risk assessment of the FIFO travel arrangements shall be conducted incorporating but not limited to.
  - o Ensuring the employee is not required to commence a shift without adequate rest time following a flight.
  - o Consideration of roster design, including flight times.
  - o Arranging transport to the airport following the last shift.
  - o Providing advice and education to employees regarding the management of fatigue and special fatigue risks associated with shift work and fly-in/fly-out operations.
  - o Providing advice on alternative transport options after flights home at the end of the roster period.

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### 15.3 Rest Breaks Prior to Returning to Work from Other Employment

It is recognized that some employees may undertake other paid employment outside of their contractual obligations with TNCL plan conditions of employment. Such employment is required to be authorized by the employee's department manager in accordance with TNCL requirements. Employees undertaking such work are required to cease such work a minimum of 10 hours prior to the scheduled recommencement of work with TNCL, to ensure a 10-hour rest period is observed.

When reviewing any application by an employee to undertake paid employment outside of their contractual obligations with TNCL, the department manager shall take into consideration the fatigue management commitments of the employee in conjunction; with the minimum 10-hour rest period requirement; and how many opportunities the employee will have for full rest days as part of the roster cycle

## 16. LEAVE MANAGEMENT

For effective long-term leave management, employees shall be strongly encouraged to take their full annual leave entitlements within 12 months of accrual. The respective department manager shall monitor leave taken by employees.


## 17. MANAGEMENT OF EMPLOYEES WHO ARE UNFIT FOR WORK (Fatigue)

Managers and supervisors will undertake the following action when an individual is deemed unfit for work for any reason.

- a) The individual will be immediately removed from the workplace and prohibited from driving a vehicle or operating any machinery.
- b) The individual will be transported back to their place of accommodation/ permitted to go back home.
- c) In the case of an employee or business partner, the individual will be prevented from returning to work until such time as they have undergone appropriate discussion with their department manager or supervisor and are able to demonstrate that they are fit for work.
- d) Employees will have access to a confidential Employee Assistance Program (EAP) to address work and personal problems.

## 18. FITNESS FOR FLIGHT

- a) Intoxicated personnel will not be permitted to fly.
- b) TNCL recognizes the right of the captain of the airplane to remove or request to remove any personnel the captain does not deem to be fit to travel.
- c) In the interest of safety of personnel, personnel may be subject to a 'fit for work' assessment to be carried out by authorized TNCL personnel, prior to boarding the areophane/charter in the event of a delayed flight.

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### 18.1 Consequence of Breach

Where personnel breaches the above limit, they will be refused boarding and will remain behind. Where personnel has been refused to board, such personnel will remain at the site until such time as a seat becomes available on a scheduled charter and any additional time spent by personnel on-site due to being refused boarding will be for the relevant personnel's own time.

## 19. TRAINING

Providing information and training to workers and supervisors about the factors that can contribute to fatigue and the risks associated with it will help them not only do their job but also implement control measures to minimize the risk of fatigue in the workplace.

### 19.1 Initial Training

All employees and business partner/contractor personnel engaged on-site shall complete comprehensive fatigue management training within 3-6 months of initial employment at TNCL. An introduction to workplace fatigue management shall be given to all employees joining the TNCL site during the general site induction.

### 19.2 Safety Critical Work

Individuals who are engaged in safety-critical work, such as mobile equipment operators, control room operators, and ERT shall undertake training within the first three (3) months of commencing work.


Individuals who are required to do on-call or call-out work shall complete this training prior to commencing on-call duties.

### 19.3 Refresher Training

All employees and business partner personnel shall complete fatigue refresher training at a minimum of one (1) yearly interval.

## 20. TECHNOLOGICAL MONITORING OF FATIGUE

TNCL aims to implement a system of technological monitoring to manage operators' fatigue by introducing a Drivers / Operator Safety System (DSS) to detect the onset of micro-sleep-fractions of seconds when a person has fallen asleep without realizing it. If operator/driver fatigue is detected, the monitoring center will notify the operator to stop and notify the shift supervisor immediately.

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### 21. RELATED DOCUMENT

- TNCL-OHS-POL-0002 - Drug and Alcohol Policy
- TNCL-OHS-SOP-0004 - Light Vehicle Procedure
- TNCL-HRE-SOP-0005 - Contractor Management Procedure
- TNCL-OHS-POL-0003 - Health & Safety Requirement for Contractors
- TNCL-OHS-MAN-0001 - OHS Management System Manual
- TNCL-OHS-GUA-0001 - Workplace Fatigue Guideline

### 22. SYSTEM EVALUATION

This procedure/plan shall be two yearly by members of the OHS department.

### 23. DISTRIBUTION

List physical locations, that require a controlled copy of this document.

Table: 4


Copy	Controlled Document Folder Location
Master	Controlled Documents Central Filing System

### 24. REASONS FOR CHANGE

Table 5

A	As a result of incidents	F	Change in training requirements
B	As a result of the audit findings	G	Results of risk assessments
C	New / changes in governance documents	H	Change due to spelling or grammatical error
D	Changes in legislation	I	New document format
E	Changes in technology	J	To integrate special instruction into the document control system




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**27. DECLARATION**

Table 8:


I hereby declare that I have taken part in the discussion of this procedure, and I understand its contents and do commit that I shall ensure compliance hereto:

	Name and Surname	Company Number	Designation / Role	Signature	Date Signed
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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## 28. APPENDICES

- Appendix A - Fatigue Symptoms Checklist.
- Appendix B - Fatigue Assessment Tool (Pre-shift start)
- Appendix C - Shift / Roster Modification Approval.
- Appendix D - Employee / Contractor Shift Worker Agreement.
- Appendix E - Contractor Fatigue Management Audit Checklist
- Appendix F - Workplace Fatigue Guidance

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### 29. Appendix A – Fatigue Symptoms Checklist

<b>Employee Name:</b>	<b>Date:</b>
<b>How did the person come to your attention?</b>	
<input type="checkbox"/> Direct observation of a person's behavior or performance <input type="checkbox"/> Self-report of fatigue <input type="checkbox"/> Other individuals raised concerns regarding a person's fatigue or performance Other _____	
<b>Did the person show any of the following signs of fatigue?</b>	
<b>Appearance</b> <input type="checkbox"/> Bloodshot eyes <input type="checkbox"/> Poor coordination <input type="checkbox"/> Frequent blinking <input type="checkbox"/> Long eye blinks <input type="checkbox"/> "Droopy" eyelids <input type="checkbox"/> Slow or disjointed speech <input type="checkbox"/> Repeated yawning	<b>Driving</b> <input type="checkbox"/> Drifting across lanes <input type="checkbox"/> Erratic steering <input type="checkbox"/> Forgot to dip the lights <input type="checkbox"/> Varied speed without noticing <input type="checkbox"/> Missed turnoff/traffic signs
<b>Mood</b> <input type="checkbox"/> Irritable/short tempered <input type="checkbox"/> Argumentative <input type="checkbox"/> Impatient <input type="checkbox"/> Poorly considered decisions <input type="checkbox"/> Overfocus on minor issues	<b>Performance</b> <input type="checkbox"/> Loss of attention <input type="checkbox"/> Difficulty following instructions <input type="checkbox"/> Request repeat for instructions <input type="checkbox"/> Reduced ability to think clearly <input type="checkbox"/> Poor anticipation <input type="checkbox"/> An automatic or repetitive ("zombie-like") behavior
<b>Are there any other factors that could make the situation worse?</b>	
<input type="checkbox"/> Currently on nightshift <input type="checkbox"/> Undertaking potentially hazardous work <input type="checkbox"/> On the first shift back after early awakening / long commute to the site <input type="checkbox"/> On the first night shift, not have an afternoon sleep <input type="checkbox"/> Medication (prescription, over-the-counter, herbal) <input type="checkbox"/> Other	
<b>General Comments:</b>	
<b>Supervisor Name / Signature:</b>	


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### 30. Appendix B – Fatigue Assessment Tool (Pre-shift Assessment)

**Use when:**

1. Employee or business partner/contractor reports they are fatigued
2. Supervisors or peers observe signs of fatigue or have concerns that an individual is fatigued
3. Other situations where there may be a fatigue risk, for example:
  - First night or day shift where thereby workers potentially travel long distances from off-days
  - New shift starts work from rotation leave
  - After hours, callouts, etc. The supervisor shall discuss with the employee/ contractor and complete the assessment together.

Assessment	Answer	Low Risk	Medium Risk	High Risk
1. How many hours of sleep have you had in the last 24 hours?	hrs	7 or more	5 to <7	Less than 5
2. How many hours of sleep have you had in the last 48 hours?	hrs	14 or more	12 to <14	Less than 12
3. Does anyone/employee work excessive hours in the last 24 hours?  i.e., all types of mental and physical work demand for day/night shift	hrs	14 hrs or less	15 to 17 hrs	More than 17
4. Do you feel alert?  RATING      DESCRIPTION 1      Feeling active, alert, or wide awake 2      Functioning at a good level, but not at peak,able to concentrate 3      OK, but not fully alert 4      A bit groggy, hard to concentrate Sleepy, 5      groggy, would like to lie down		1 -2	3	4 -5
5. How many alcoholic drinks did you have before yoursleep? Alcohol affects the quality of sleep	Male Female	0 – 4 0 - 2	5 - 6 3 - 4	7 or more 5 or more
6. Are you on any medication or other substances thatcould cause drowsiness or cause you to be unfit for work?		No		Yes
7. Do you have any stress, health problems, or other personal problems that significantly affectyour concentration and/ or sleep?		No		Yes
Score the responses as instructed: 1 Add the number of different colored boxes 2 Times this number by the respective multiplier toget a risk score for each color 3 Add the risk scores together		Total Green boxes ticked	Total Yellow boxes ticked	Total Red boxes ticked
<b>Multiplier</b>	<b>x</b>	<b>0</b>	<b>1</b>	<b>2</b>
<b>Risk Score</b>				
<b>TOTAL RISK SCORE (add scores together)</b>				

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LEVEL OF RISK	SUGGESTED ACTION
<b>LOW RISK</b> Scored 0-2 on the risk assessment. individual is: <ul style="list-style-type: none"> <li>• Alert</li> <li>• Normal eye blinks (less than 1 second)</li> <li>• Attends to surroundings</li> <li>• Coordinated body movements</li> <li>• Tolerant of others</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to monitor</li> <li>• Remind individuals about fatigue and alertness management strategies (interaction with others, coffee, exercise, cold air on the face, etc.).</li> </ul>
<b>MEDIUM RISK</b> Scored 3-7 on the risk assessment OR The individual reports he/she is fatigued. Individuals may be showing the following signs: <ul style="list-style-type: none"> <li>• Irritable/impatient</li> <li>• Longer eyelid closure (1-2 seconds)</li> <li>• Wandering thoughts</li> <li>• Rubs eyes or face</li> <li>• Facial contortions</li> <li>• Restless movements</li> <li>• Yawning</li> </ul>	As above plus ... <ul style="list-style-type: none"> <li>• Rotate tasks</li> <li>• Encourage the use of alertness strategies</li> <li>• Provide an opportunity for a short break/brief nap of no more than 15 minutes.</li> <li>• Have personnel work together (if possible).</li> <li>• Remove from safety-sensitive work.</li> <li>• Assess fitness for work before you allow a person to return to work.</li> <li>• Schedule regular supervision for the remainder of the shift.</li> </ul>
<b>HIGH RISK</b> Scored 8-14 on the risk assessment OR The individual reports he/she is significantly fatigued. Individuals may be showing the following signs: <ul style="list-style-type: none"> <li>• Quiet and withdrawn</li> <li>• Long eyelid closure (2 or more seconds)</li> <li>• Fixed staring</li> <li>• Frequent yawning</li> <li>• Micro sleeps</li> </ul>	<ul style="list-style-type: none"> <li>• Immediately prevent a person from working.</li> <li>• Send home (provide transportation - do not allow the person to drive themselves).</li> <li>• Complete incident report</li> <li>• Review the situation to determine possible causes and action required (see next section).</li> </ul>

I have had a one-on-one discussion with my supervisor and have responded honestly to all questions. I agree to follow the controls listed below to manage any identified fatigue issues:

**Action Taken:**

No action is required –the individual is to report any further fatigue issues to the supervisor

Controls implemented:

Individual sent home- transport arrangements:

Other:

**Employee / Crew Name:** \_\_\_\_\_

**Supervisor Name:** \_\_\_\_\_

**Employee (s) Signatures:**  
(attach all) \_\_\_\_\_


**Supervisor Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Time:** \_\_\_\_\_

**Work shift (D/N)** \_\_\_\_\_

**Date:** \_\_\_\_\_

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**Supervisors' Remarks:**

**NOTE:**

This assessment form can be utilized to assess an individual employee or the whole crew

**31. Appendix C - Shift / Roster Modification Approval**

Employee Name	Date
Rostered Start Date	Shift
Rostered End Date	Shift
Required Start Date	Shift
Required End Date	Shift

Request Approval for +14-hour Shift

Yes                      No

Date \_\_\_\_\_

Risk Assessment Attached                      Yes                      No

I am aware of the proposed temporary roster change and my requirements as detailed in the associated risk assessment. Additionally, I understand that if I am required to perform duties onsite for greater than 14 hours the additional controls defined within the TNCL fatigue management plan shall apply

Employee Signature \_\_\_\_\_

**Department:**


Superintendent Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Manager Name: \_\_\_\_\_

Signature: \_\_\_\_\_

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Date: \_\_\_\_\_

**32. Appendix D - Employee / Contractor Shift Workers Agreement**

**EMPLOYEE**

I, \_\_\_\_\_ understand that I have a responsibility to:

Manage my personal fatigue to ensure that I attend work in a fit state to do so.

Attend all fatigue management training required as part of my employment.

Ensure that I get adequate sleep prior to and between shifts, including having a sleep prior to my first night shift.

Report any issues that I am aware of that impact my personal fatigue (including, but not limited to, inadequate rest prior to shifts, and any medication taken that may cause drowsiness or sleeping disorders).

Worker Name: \_\_\_\_\_

Workers Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Supervisor Sign-Off:

**SUPERVISOR**


I, \_\_\_\_\_ have provided information on the TNCL fatigue management plan

Requirements to \_\_\_\_\_ and discussed the fatigue risks relevant to his/her work tasks and roster pattern with him/her

Supervisor Name: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_


Date:

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### 33. Appendix E – Contractor Fatigue Management Audit Checklist


<b>Auditor Name</b>		<b>Audit Date</b>	
<b>Company</b>		<b>Department</b>	
<b>Company Rep Name</b>		<b>Company Rep Occupation</b>	

SN	Audit Questions	Y/N/NA	Comments
1	Is there a fatigue Management Procedure in place	Choose an item.	
2	Is there a fatigue management training program	Choose an item.	
3	Have employees been trained in fatigue management?	Choose an item.	
4	Does the working hours take into consideration fatigue	Choose an item.	
5	Does the shift pattern take into consideration fatigue	Choose an item.	
6	Do employees work more than 12 hours regularly (including overtime)?	Choose an item.	
7	Is there a compensation break system for employees who work overtime?	Choose an item.	
8	Is there a system for reporting fatigue?	Choose an item.	
9	Is there a fatigue monitoring system installed in all equipment where appropriate	Choose an item.	
10	Are there adequate breaks for employees (especially night shift employees)	Choose an item.	
11	Do workers have to travel more than one hour to get to their job?	Choose an item.	
12	Is there a system in place for workforce consultation on the management of fatigue risks?	Choose an item.	
13	Are clear procedures in place for the provision of overnight accommodation, alternative transport, or a well-rested relief driver/operator where necessary?	Choose an item.	
14	Are periodic drug and alcohol checks conducted for employees?	Choose an item.	
15	Is there a system for employees to go through pre-employment and annual medical checks?	Choose an item.	

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### 34. APPENDIX F – FATIGUES WORKPLACE FACTORS GUIDELINE

Appendix F - Fatigue Guideline may be found on a separate page

	<b>STANDARD OPERATING PROCEDURE</b>	Document No:	TNCL-OHS-FRM-0077
		Document owner	OHS Manager
	<b>FATIGUE MANAGEMENT GUIDANCE</b>	Revision	00
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Shift pattern	Comments	Advice
Permanent shifts	Regular shifts allow a worker to adjust to a shift schedule to a certain degree, although any adjustment of the internal body clock will be lost during rest days if they revert to a normal diurnal cycle. <b>Permanent night workers and early morning workers run the risk of chronic sleep debt, fatigue, ill health, and disruption of family and social life.</b>	Permanent night shifts should be avoided where possible, although some workers and supervisors may find them desirable. Ensure staff, especially those who work permanent night shifts or early morning shifts, are aware of the risks through the provision of training and information. <b>At TNCL, employers will only be allowed to work a permanent night shift after the General Manager's approval.</b>
	Regular shifts allow workers to plan domestic and social activities. They are appealing to some workers, but others may prefer the flexibility of rotating shifts.	If reasonably practicable, offer workers the choice between permanent and rotating shifts.
	It can create strong, healthy bonds within shift teams but may also encourage less healthy attitudes or behaviors to develop, which could lead to a team making bad or irrational decisions.	Ensure there is enough supervision of shifts to facilitate communication between workers and promote appropriate behavior and rational decision-making.
	There may be poor communication due to limited contact between different shift teams	Improve communication at shift handover to ensure that new shift teams are fully aware of issues that have arisen