NTWorkSafe

Guide

Remote or isolated work



Disclaimer

This publication contains information regarding work health and safety. It includes some of your obligations under the *Work Health and Safety (National Uniform Legislation) Act* – the WHS Act – that NT WorkSafe administers. The information provided is a guide only and must be read in conjunction with the appropriate legislation to ensure you understand and comply with your legal obligations.

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Introduction

Purpose

The purpose of this guide is to raise awareness among persons conducting a business or undertaking (PCBUs), safety practitioners, managers, supervisors and workers of the hazards that may be present for people required to work remotely or in isolation.

The guide is designed to assist in the identification, assessment and control of the hazards associated with remote or isolated work and the development of appropriate policies and procedures to enable organisations to meet their obligations under the:

- Work Health and Safety (National Uniform Legislation) Act and Regulations
 the WHS Act and Regulations
- Code of Practice Managing the work environment and facilities
- Code of Practice First aid in the workplace

Scope and application

Under the WHS Act and Regulations, PCBUs, workers and other persons have a responsibility to ensure the health and safety of people at work and those people that may be affected by that work.

PCBUs and workers (and/or their representatives) are encouraged to develop a specific policy, assisted by this guide, and to disseminate it for access and reference by all managers, supervisors and workers.

This guide is not intended to override or replace existing agreements between PCBUs, workers and their representatives.

Who is responsible for ensuring health and safety

Under the WHS Act, both PCBUs and workers have a duty to ensure health and safety in the workplace. The Act defines the meaning of 'workplace' as a place where work is carried out for a business or undertaking and includes any place where a worker goes, or is likely to be, while at work.

PCBUs have a duty of care under Section 19 to ensure, so far as is reasonably practicable, the health and safety of their workers while they are at work.

PCBUs must provide and maintain a work environment that is healthy, safe and without risks to the health of workers, or other persons affected by the conduct of the business or undertaking.

PCBUs should proactively identify, assess, control and monitor tasks or workplace environments that present a risk to remote or isolated workers using a risk management approach.



PCBUs should:

- determine whether remote or isolated work is necessary and identify the hazards and appropriate risk control measures
- determine the level of worker supervision required
- engage and consult with workers (and/or their representatives) to decide what level of support and assistance is required. This may include:
 - consulting workers about health and safety policies and procedures
 - providing worker support systems, including appropriate training
 - ensuring that workers understand the risk associated with their work and the necessary precautions to be taken
 - managers and supervisors providing guidance in situations where the risks of remote or isolated work are unclear
 - managers and supervisors making periodic site visits and addressing health and safety issues that arise. If appropriate recommendations for improvements or corrective action are made, these should be carried out within a reasonable timeframe.

Workers have a duty under Section 28 of the WHS Act to take reasonable care for their own health and safety, and the health and safety of other persons, and to comply with reasonable safety instructions given by the PCBU.

Workers should work with PCBUs to identify and control the risks associated with remote or isolated work and assist to put in place appropriate health and safety measures.

Workers should:

- report any health and safety issues as soon as possible including unexpected fatigue, feeling compromised (physically or mentally) or requiring additional support
- comply with any reasonable workplace health and safety policies and procedures, and if in doubt seek further assistance
- report all injuries, accidents or incidents including any issues with the health and safety policies or procedures that are in place.

In practice, the responsibility for managing the health and safety of remote or isolated workers is shared by several parties across an organisation and the level of monitoring and management required should be determined by the degree of hazard of the work, or work environment, based on a comprehensive risk assessment. Officers of PCBUs will often have a crucial role in regard to these matters.



What is remote or isolated work?

Geographical locations are split into five categories:

- Major Cities
- Inner Regional
- Outer Regional
- Remote
- Very Remote.

The Australian Standard Geographical Classification Remoteness Areas classification (ASGC RA) defines remoteness based on geographical and population data.

In addition to the definition outlined by the ASGC RA, the WHS Regulations define remote or isolated work as 'work that is isolated from the assistance of other persons because of the location, time or nature of the work

Although the terms 'remote' and 'isolated' fall under the same definition there are some key differences that PCBUs, safety practitioners, managers, supervisors and workers should be aware of:

- Isolated work may involve work activities undertaken in an isolated area (geographical isolation), on or off site, either during or outside normal working hours (temporal isolation).
- Remote work may involve work activities undertaken at a location removed from an office environment where there are few people and where communications and travel are difficult. This may include land or sea activities within Australia or overseas.

A worker may be considered remote or isolated even if other people may be close by. In some situations, a worker may be alone for a short period of time, while in other situations they may be on their own for days or weeks in a remote location.

Workers may work remotely or in isolation if they:

- physically work alone, for example, at night in a laboratory
- work separately from others, for example, in a regional office building
- work at home or engage in teleworking activities
- work outside normal working hours, for example, on call workers
- work shift work or night work
- travel as part of work
- travel long distances, for example, freight transport drivers
- work unsupervised, for example, teleworkers
- work in geographical isolation, for example, scientists or park rangers carrying out field work
- work on a reduced roster, for example, on public holidays
- work in isolation with members of the public, for example, health and community workers.



This guide does not set down a minimum time that a worker has to be on their own for them to be considered 'remote' or 'isolated'. Each situation should be assessed according to its circumstances, taking into account specific factors that may present a risk to the worker.

Who is considered a 'lone worker'?

Lone workers are considered those who work by themselves and/or work in the community with only limited support arrangements, which therefore expose them to risk by being isolated from the usual back-up support. This is the case whether they regularly work alone or are only occasionally alone and do not have access to immediate support from managers or other colleagues.

Types of risks with remote work

The potential risk of any serious injury from existing hazard is increased in these unique working environments and requires additional precautions to be taken. A major danger for remote or isolated workers is sustaining an injury that precludes self-rescue, such as overnight or during weekends or holidays, where assistance from other people may be limited.

Each work activity or situation proposed for a worker to undertake should be considered in terms of associated risk factors to determine the degree of exposure and level of potential harm involved.

The following risks are explored in this guidance:

- 1. Work environment (geographical terrain, climate, plant and fauna)
- 2. Remote premises/accommodation (office, plant and equipment)
- 3. Remote communication systems and procedures
- 4. Physical and psychological fitness for duty (fatigue management, disease and recruitment issues)
- 5. Vehicles and travel (land, sea and air) is it fit for purpose and are any modifications compliant?
- 6. Information, training and supervision (including cultural awareness)
- 7. Emergency plans.

By considering the questions below and conducting a hazard identification and risk assessment process in consultation with workers, you should be able to identify the issues relevant to your unique working environment and take action to limit the risk of an incident occurring. The below risks and questions are not exclusive. You know your business the best and will have other questions to explore. Other risks include lack of services, use of alcohol and drugs, body stressing, relationships, time pressures and response times, conflict, access to services, electrical, working at heights, confined spaces, marine work, and many others.



1. Work Environment

The work environment encompasses many aspects including the location, the nature of the work, the design and layout of the workplace, as well as environmental conditions, plant and animal activity.

Location and nature of work

Risk / questions to identify risk	Possible mitigation approaches
The location of the work:	Don't do the work.
Is the work in a remote location that	Can the work be relocated?
makes immediate rescue or attendance of emergency services difficult?	Consult with emergency services about possible rescue scenarios.
Is the work conducted outdoors?	Provide vehicles, equipment, tools and
What is the terrain like?Is back-up power likely to be needed?	communications equipment suitable for use in the terrain.
is back-up power likely to be freeded:	Source suitable back-up power sources
	for the location.
The nature of the work:	Establish what a reasonable time is for
How long would the person need to be isolated to finish the job?	the person to be alone given the circumstances.
Is there an increased risk at certain times of day?	Is it reasonable for the person to be alone at all?
Is there adequate information and	Avoid work at risky times of day (such as
instruction for the person to be able to work alone safely?	when the circadian rhythm wants the body to sleep).
What machinery, tools and equipment	Risk at certain times of day may be
may be used?	related to climatic conditions (such as heat, cold, storms). Where possible
Is machinery and equipment maintained as per manufacturers' guidelines?	avoid these conditions.
Are high risk activities involved?	Ensure machinery/tools/equipment is
For example, working from heights,	maintained to manufacturers' specifications.
working with electricity, hazardous substances, hazardous plant or	For high risk work, refer to the WHS
equipment (such as chainsaws or	Regulations and model Codes of
firearms).	Practice for specific risk management requirements.
Is there likely to be work in a confined space and is the air in the confined	Refer to the WHS Regulations and
space likely to be low in oxygen or	model Code of Practice for specific risk
contaminated in some way?	management requirements for confined spaces.
Is fatigue likely to increase risk? For example, long hours driving a	It may be necessary to provide
vehicle or operating machinery.	accommodation for workers to rest
Is there an effective system for checking	before embarking on a long journey.Changes to routine or timing when
that all personal protective equipment (PPE) and emergency equipment is	transporting valuables or when
provided and in good working order?	undertaking routine and scheduled
Is there an increased risk of violence or	activities.



Risk / questions to identify risk	Possible mitigation approaches
aggression when workers have to deal with clients or customers themselves?	 Eliminate cash handling. Adequate building security for out of hours work. Provide training, such as non-violent intervention techniques. Liaise with local police and emergency services personnel. Provide safe rooms or panic alarms.

Workplace layout and design

Workplaces and their surrounds can be designed to support the flow of work. For example, workplaces can have a specific entrance and exit, barriers and fences that prevent access to dangerous areas, and a reduced likelihood of violence through physical barriers, monitored CCTV and enhanced visibility.

Risk / questions to identify risk		Possible mitigation approaches	
•	Can environmental factors affect the safety of the worker? (e.g., exposure to extreme hot or cold environments)	 Consider scheduling outdoor work for early morning and late afternoons in tropical environments, where 	
•	Be aware of heat stress (see Appendix 3) and dehydration in hot climates and the risk of hypothermia in cold climates.	appropriate.Take frequent breaks when working in extreme temperatures.	
•	Can conditions change rapidly? (such as storms, snow storms, sand storms, flooding)	Dress appropriately for the conditions.Obtain weather forecasts to see what the chances are of irregular weather.	

Plant and animal activity

Risk / questions to identify risk	Possible mitigation approaches	
 Is there a risk of attack by an animal, including reptiles, insects and sea creatures? Does the worker have an allergy to animals? Will the worker be in an area where irritating or toxic plants grow? 	 Provide appropriate repellent (a stronger type is needed in the tropics). Train staff to identify dangerous animals and their habitats. Train staff in appropriate first aid treatment should they be bitten. Check that staffs with allergies have an appropriate self-management plan (they may need to carry and know how to administer an EpiPen). Where possible, establish if any toxic plants are likely to be in the location of the planned work. Warn workers of their presence, provide PPE, and have appropriate medical treatment available. 	



A note about asbestos

Asbestos was used widely as a building material from 1921 through to 1987, but it wasn't completely banned until 2003.

It is commonly found in materials such as:

- roofing, shingles and siding
- fencing
- exterior wall cladding
- backing material on floor tiles and vinyl flooring
- textured paints
- water or flue pipes.

When such materials are left undisturbed they are relatively harmless. However, if the material is damaged or disturbed it may release fibres into the air which can be breathed in and lodge within the lining of the lungs. This can lead to developing an asbestos-related disease over time.

When working in remote locations you should be alert to the fact that asbestos-containing materials may be present where you are going to work.

Asbestos-containing materials should be clearly labelled but it is likely that in remote areas this may not have occurred. It is also likely that over time some materials may have deteriorated and may no longer be bonded together.

Unless you are a licensed asbestos removalist, you should not work with asbestos.

2. Remote premises (accommodation, office, plant and equipment)

Accommodation

If a PCBU has workers working in regional and remote areas, accommodation may need to be provided while the work is being carried out.

An example of such arrangements would be where accommodation is provided to fruit pickers during the harvesting season, shearers on a sheep station or workers engaged in construction work at a remote location.

- be lockable, with safe entry and exit
- meet all relevant structural and stability requirements
- meet electrical and fire safety standards
- have all electrical devices tested and tagged
- have a supply of drinking water
- have appropriate toilets, washing and laundry facilities
- be regularly cleaned and have rubbish collected
- be provided with suitable sleeping quarters shielded from noise and vibration



- have crockery, utensils and dining facilities
- have adequate lighting, heating, cooling and ventilation
- have storage cupboards and other suitable furniture
- be provided with a refrigerator or cool room
- have all fittings, appliances and equipment in good condition.

Office

Any office facilities provided need to be suitable for the purpose.

This includes:

- provision of cooling in hot environments/heating in cold environments
- availability of power, clean water, and toilets
- suitable lighting for tasks
- desks and chairs suitable to the task (that is, ergonomically adjustable)
- planning emergency exit drills
- ensuring rear door or secondary doors are locked
- providing two-way radios or 'panic button' alarms
- installing motion sensing alarms, particularly in buildings where no other workers are working
- installing phones in isolated areas, such as store rooms or secure rooms
- pre-programming telephones to dial emergency numbers
- installing good outside lighting.

Plant and equipment (refer to number 5 for vehicles)

Plant includes any machinery, equipment or tool and their components. The term 'plant' is not limited to machinery used in production, or mechanical or electrical equipment only. It may also include items such as a chair used by a person at work. Any plant and equipment provided needs to be suitable for the purpose it is to be used in.

There are comprehensive regulations surrounding plant so you should refer to the WHS Regulations and the model Code of Practice *Managing risks of plant in the workplace*.

3. Remote communication, systems and procedures

Ensuring workers are able to make contact with support services, particularly in cases of emergency, does not necessarily mean you have to spend lots of money on state-of-the-art satellite tracking systems.

The type of system chosen will depend on factors such as the distance from 'home base', the environment in which the worker will be located or through which they will be travelling (that is, the terrain), expected environmental conditions, and access to power (to recharge batteries). Expert advice and local knowledge may be needed to assist with the selection of an effective communication system.



Communication systems

If a worker is working alone in a workplace, communication via the telephone may be adequate, provided the worker is able to reach the telephone in an emergency. In situations where a telephone is not available, a method of communication that will allow a worker to call for help in the event of an emergency at any time should be chosen.

Risk / questions to identify risk

- Mobile phones cannot be relied upon as an effective means of communication in many locations. Coverage in the area where the worker will work should be confirmed before work commences. Geographical features may impede the use of mobile phones, especially at the edge of the coverage area, and different models have different capabilities in terms of effective range from the base station.
- What forms of communication does the worker have access to?
- Is voice communication essential for the safety of the person?
- Will the emergency communication system work properly in all situations?
- If communication systems are vehiclebased, what arrangements are there to cover the worker when they are away from the vehicle?
- Is there a back-up system?
- Is there another organisation working in the same area that can be utilised in the safety approaches?
- If radios are used, what is the range of the unit, which frequency, and is there a maintenance program?
- Workers trained in the use, cleaning and maintenance of communication equipment.

Possible mitigation approaches

- Mobile phones—consult the provider if there is any doubt about the capability of a particular phone to sustain a signal for the entire period the worker is alone. If any gaps in coverage are likely, other methods of communication should be considered. It is important that batteries are kept charged and a spare is available.
- Personal security systems, being wireless and portable, are suitable for people moving around or checking otherwise deserted workplaces. Some personal security systems include a non-movement sensor that will automatically activate an alarm transmission if the transmitter or transceiver has not moved within a certain time.
- Radio communication systems enable communication between two mobile users in different vehicles or from a mobile vehicle and a fixed station. These systems are dependent upon a number of factors such as frequency, power, and distance from or between broadcasters.
- Satellite communication systems enable communication with workers in geographically remote locations. Satellite phones allow voice transmission during transit, but their operation can be affected by damage to aerials, failure of vehicle power supplies, or vehicle damage.
- Distress beacons should be provided where life-threatening emergencies may occur, to pinpoint location and to indicate by activation of the beacon that an emergency exists.

Communication procedures



Good practice for managing remote workers includes having a schedule of regular phone calls from the worker to someone who is in a position to raise an alarm if the worker fails to phone in. A policy or work instruction on frequency of calls, the number to call, and the action to be taken if the call is not received, should be developed and provided to all relevant workers. This could also include family members as a point of contact, other organisations in the area, and community leaders if they are equally able to raise the alarm. Procedures developed should be tested to ensure they work.

Risk / questions to identify risk	Possible mitigation approaches	
 Do communication procedures exist? Are people aware of them and know how and when to use them? Are they reviewed to ensure they are still relevant and applicable? 	 Procedures need to clarify what needs to be done in the course of normal work to communicate with the employer (such as hourly phone calls, a check in/out system). In the case of emergency, procedures need to clearly identify the steps to follow (such as alerting relevant authorities and family members). Workers should be trained in the use of any personal communications equipment they have been supplied (such as EPIRBs). 	

Additionally, a process involving the clocking in and out of staff will help keep track of their movements. Satellite tracking systems or devices may also have the capability of sending messages as part of a scheduled call-in system, and have distress or alert functions.

There are many communication options available and irrespective of which approach you use, you need to ensure you have operating procedures to ensure the effective operation and awareness of the remote communication system.

4. Physical and psychological fitness for duty (fatigue management and recruitment issues)

PCBUs are responsible for ensuring that individual workers are fit to perform the proposed duties. This includes consideration of the potential impact of existing medical conditions that may put them or others at risk while performing the intended work.

You should also consider both routine work and foreseeable emergencies when assessing whether a worker is medically fit to perform the activities, noting that emergency situations may impose additional physical and psychological burdens on individual remote or isolated workers.



Physical risks

This includes those already described in this guidance as well as the physical capabilities of the employee, including the level of fitness required to perform the proposed duties.

Risk / questions to identify risk

- Has the person had training to prepare them for working alone and, where applicable, in remote locations?
- If a road vehicle is used, is the person competent to drive on country roads and in off-road situations?
- Is the worker able to make sound judgments about their own safety?
- Is the person physically capable of completing all work activities alone?
- Are you aware of a pre-existing medical condition that may increase risk?

Possible mitigation approaches

- Ensure staffs has been trained not only in the job they are to perform, but with any equipment, tools, and specific work procedures relevant to the job.
- Provide additional training on safety protocols in remote locations, for example, first aid training, relevant administrative procedures, vehicle breakdowns, communication systems and bush survival.
- Check competency levels before allowing staff to drive off-road vehicles (check they have a valid driver's licence, and note any previous experience). A refresher course even if they are experienced may be warranted as they may not have faced the conditions before.
- Do you know what level of risk the person is willing to take? Is it too high for the work to be carried out?
- When did they last have a medical or fitness test? Do you encourage these as part of your organisation's wellbeing program?

Psychological risks

It's important to understand the other types of triggers that can induce stress when managing or participating in remote or isolated work.

- Environmental stressors such as elevated sound or overcrowding often multiply the effect on fatigue and performance
- Exposure to combined 'temporal' stressors (shift work and long hours) in addition to physical stressors (noise, hazardous substances and so on) have significant effects on physiological measures (including blood pressure), that may not be present for either of the stressors separately.
- Excessive occupational noise combined with night-shift work increases the risk of high blood pressure when compared to noise exposure alone.



Fatigue (physical and mental)

Fatigue is mental or physical exhaustion that prevents a person from performing work safely and effectively. It is more than feeling tired and drowsy—it is a physical condition that can occur because of prolonged exertion, sleep loss and/or disruption of the internal body clock.

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

Examples include:

- too little or poor quality sleep
- working at times when you would normally be asleep
- travel to a different time zone and/or climate
- travelling long distances
- carrying out mentally or physically demanding activities
- poor nutrition and/or inadequate hydration
- effects of alcohol and/or other drugs
- driver fatigue (see appendix 4).

Only sleep can cure fatigue. Sleep debt is cumulative and must be repaid. We require 7.5 hours of uninterrupted sleep each night (this will vary with age).

Risk / questions to identify risk Possible mitigation approaches Too little or poor quality sleep. Ensure employees have a prescribed break to allow adequate down time and Working at times when you would sleep. normally be asleep. Avoid night shift work into the early Travel to a different time zone and/or hours of the morning. climate. Allow adequate time for the body clock Traveling long distances. to adjust to different time zones before Carrying out mentally or physically commencing work. demanding activities. Ensure good supply of drinking water. Poor nutrition and/or inadequate Have a zero alcohol policy at work. hydration. Effects of alcohol and/or other drugs. Driver fatigue (see Appendix 4).

Recruitment: An example from the Australian Antarctic Division (AAD)

The Australian Antarctic Division (AAD) pays particular attention to the selection of personnel due to the remote and isolated nature of the work they carry out. Workers can spend several weeks away from civilisation and face a multitude of remote worker risks, so AAD pays close attention to the following factors when recruiting:

- ability to perform the task, including medical fitness
- stability and resilience (measured in terms of mental health)
- compatibility (social skills)



By selecting people with the above traits, AAD are trying to minimize the risk to people of stressors that arise from work in remote environments. The most typical stressors in the Antarctic are:

Personal: Separation from partner (especially intimate partner), family, and friends, which can be a major cause of mood/adjustment problems.

Environmental: Social and physical stressors characterised by a lack of acclimatisation to a hostile, climatically diverse and intense or restrictive environment.

Occupational: Work roles carried out and their ability to perform them in an inherently restrictive environment (due to extremely low temperatures and lack of movement).

Physical health: Some physical issues can be caused by the onset of unaddressed psychosocial issues.

5. Vehicles and travel

Travel may be via land, sea or air, and it is important to ensure the vehicle used for travel is fit for purpose.

It may be that specialised vehicles are required for the area where work is to be carried out (such as in Antarctica, where snow capable vehicles are required). Additionally, normal vehicles may need modification (such as long-range fuel tanks and 4WD vehicles). Any modifications should always be within manufacturers' specifications and compliant with any applicable standards.

The level of risk may vary with different types of vehicles (4WD, All wheel drive, and 2WD), different bikes (two, three or four wheels) and other forms of transport (trucks, planes, boats, skis, and so on).

Risk / questions to identify risk

- What is the form of transport available?
- Is it appropriate for the nature of the task?
- Is the vehicle fitted with emergency supplies, such as adequate drinking water?
- What is likely to happen if there is a vehicle breakdown?
- Will the person be required to leave their vehicle for long periods of time?
- What first aid equipment is available for immediate treatment? (for example, a first aid kit in the vehicle)
- If first aid equipment is vehicle-based, what arrangements are there to cover the person when they are away from the vehicle?
- What level of first aid training is required

Possible mitigation approaches

- Certified training should be given to anyone who will be riding the vehicle prior to its use and should be provided or arranged at the point of sale. Reading a manual or viewing an instructional video should be done in conjunction with certified training to enhance that training.
- Ensure vehicles are used within the manufacturers' guidelines.
- Quad bikes are not recommended for load carrying or towing.
- Helmets are compulsory quad bike apparel, and may be for other vehicles.
- Ensure vehicles are properly serviced.
- Never carry passengers on a single seat vehicle.
- Ensure that vehicles are not ridden whilst under the influence of alcohol or



Risk / questions to identify risk	Possible mitigation approaches
for the person to be able to use the first aid equipment?	drugs. Risk assessments, where applicable,
Quad bikes and short wheelbase vehicles can roll easily, especially on loose terrain or any area where hazards may be present.	 should be undertaken prior to operation. Ensure that inexperienced riders have received the proper certified training before riding a quad bike.
Inexperienced riders/drivers are at particular risk.	Never allow an unlicensed person or person under 16 years of age to operate a quad bike or licensed vehicle.

6. Information, training and supervision (including cultural awareness)

Information, training, and instruction

Workers need training to prepare them for working alone and, where relevant, in remote locations. This might include training in dealing with potentially aggressive clients, using communications systems, administering first aid, obtaining emergency assistance, driving off-road vehicles, or bush survival as well as their actual job requirements.

Workers should be sufficiently trained to enable them to identify hazards and take appropriate action to avoid harm. They must be able to leave the workplace if there is a serious or imminent threat to their health and safety.

Remember, we all perceive risk differently based on our own experiences and knowledge. Therefore something one person considers to be too risky may be accepted by another. For example, using a mobile phone while driving). While it is illegal in some states and territories to use a mobile phone while driving, many people do. Why? People who make the choice to break the law perceive the level of risk to them to be low, and are willing to accept the risks of being caught and being involved in an accident. Therefore, it is not only important to train people to identify and assess risk but also what an acceptable level of risk is.

Remote or isolated workers need to be made aware of the risks associated with their work, and controls should clearly define the limits of work that can be carried out while working alone. Training is particularly important where limited supervision is available to control, guide and assist in uncertain situations or circumstances.



Supervision

PCBUs should devise suitable systems to monitor the conditions of workers working remotely or in isolation.

At a minimum, such systems should include:

- procedures to schedule periodic visits by supervisors to visually observe workers and provide appropriate support and assistance
- procedures to maintain regular contact between workers and supervisors using a telephone, or other suitable communication devices
- automatic warning devices that raise the alarm in an emergency and are activated by absence of activity from the worker
- a 'check-in' at the beginning and 'sign-off' at the end of the working period
- escorts to vehicles (if working alone after hours).

Further information on managing remote workers is provided in Appendix 5.

Cultural awareness

Cultural awareness means understanding that a person's culture informs their beliefs, values and behavior.

A capacity to recognise that cultural differences exist and to be open to learning from these differences is the essence of cultural awareness.

Before travelling remotely you need to research the community you are attending, acknowledge the original landowners by contacting them (the CEO of the council or the Mayor of the community) to seek permission to enter their lands and to organise an appropriate time to visit.

To build good relationships in and with Indigenous communities, you need to:

- be respectful of the community and their culture
- follow the protocols of visiting the community
- take the time to get to know the community and the elders
- not take sides or get involved in local politics
- spend more time in the community (longer and more frequent stays)
- be mindful of where you are driving/visiting as some areas may be closed due to a death in the community (having significant meaning or link to the deceased).



7. Emergency plans

First aid

Remote or isolated workers need ready access to first aid equipment and facilities at all times. Risk assessments may indicate that the worker needs training in first aid, particularly in situations where there is no access to a qualified first aider.

Where first aid kits are provided to individuals or made available in vehicles, the worker should be trained in using the kit provided.

Risk / questions to identify risk	Possible mitigation approaches	
Do you know what the requirements are for your workplace?	 Refer to the Code of Practice 'First aid in the workplace' available from NT WorkSafe. 	

Emergency procedures

Emergency procedures, including in the event of serious or imminent danger, should be established and workers trained in the use of emergency equipment. Information about emergency procedures and danger areas should be provided to remote or isolated workers.

Outside normal hours of work (typically in the evenings and at weekends) access and egress routes may be limited for security reasons and mechanisms for opening/closing doors may vary. PCBUs should ensure that workers working outside normal hours are aware of emergency exit routes and that adequate emergency assistance is available if needed.

Risk / questions to identify risk	Possible mitigation approaches	
Can staff safely evacuate buildings? (that is, emergency exists aren't blocked, including for people with mobility issues)	An emergency plan for all buildings exists and drills are conducted to ensure they work.	
 Aggressive or violent clients may threaten workers. Do you have emergency plans in case a situation escalates? Accidents in the field/missing persons. 	 Workers with client contact are trained in communication skills to diffuse situations. Provide emergency panic buttons or rooms for workers who are threatened to summon help or retreat to safety. Emergency plans to respond to people who don't report in or activate safety protocols are in place and staff know what their responsibilities are in those situations. 	



Reviewing hazards

You can use the same methods as in the initial hazard identification to check that controls that have been implemented are still adequate.

You should consult with workers (and/or their representatives) and consider the following questions:

- Are the control measures working effectively in both their design and operation?
- Have the control measures introduced new problems?
- Are workers taking short cuts?
- Have all hazards been identified?
- Have new work methods, new equipment or chemicals made the job safer?
- Are safety procedures being followed?
- Has instruction and training provided to workers on how to work safely been successful?
- Are workers actively involved in identifying hazards and possible control measures?
- Do they understand what an unacceptable level of risk is, in terms of your organisation's policies?
- Are workers openly raising health and safety concerns and reporting problems promptly?
- Is the frequency and severity of health and safety incidents reducing over time?
- If new legislation or new information becomes available, does it indicate current controls may no longer be the most effective?

If problems are found, the risk management steps should be reviewed and further decisions made about the appropriateness of the risk controls.

Priority for review should be based on the seriousness of the risk.

Control measures for serious risks should be reviewed more frequently.

Incident reporting and investigation

PCBUs should establish an appropriate system for reporting and investigating injuries, illnesses and dangerous incidents that may occur as a result of remote or isolated work activities. PCBUs should ensure that workers are aware of the process to follow when reporting an incident and workers should be encouraged to proactively identify any health and safety issues in their workplace and report in a timely manner.

Notification of an incident is a statutory obligation outlined in Section 35 of the WHS Act. Refer to NT WorkSafe information bulletin Work Health and Safety - Incident Notification for further details. Irrespective of whether an incident is notifiable to NT WorkSafe, all incidents should be captured and recorded by the organisation for future analysis.



Fly-In Fly-Out workers (FIFO)

Fly-in fly-out (also known as FIFO) is a type of employment common with organisations that have remote locations and operations within them.

The most popular industry is mining due to the remote nature of many mines.

FIFO describes workers who are flown to their work site where they work for several days and are then flown back to rest.

- FIFO workers often work long hours as a result of job design and culture.
- A common arrangement to prevent fatigue is to allow a recovery of 'circadian adjustment' period following shore leave of two to three days.
- If the workload isn't reduced during this time the effects of fatigue can add up and even carry over to the following period of shore leave.

FIFO work design – impacts on fatigue

There is a strong link between the way work is designed and organised for FIFO workers and the impact that this has on individual health and safety, including levels of fatigue, sleep patterns, alcohol use and overall general health.

Research involving FIFO workers at a remote mining site measured performance and fatigue at the start/finish of each 12 hour shift throughout the 28-day roster and identified the following:

- Fatigue increased significantly at the end of night shifts, during the first three days, then from day eight onwards.
- The volume of sleep, which averaged at 6.8 hours per night, had no impact on fatigue.
- Temperature and blood pressure of workers alters at the beginning of night shift (known as diurnal rhythm).
- The severity and combination of these effects on worker performance are equal to or greater than the effects of having a blood alcohol level of 0.05 per cent.



Managing the risks of remote work - some ideas

Buddy system

Some jobs present such a high level of risk that workers should not work alone. In these situations PCBUs should consider implementing a 'buddy system' to ensure that any health and safety or security risks posed to workers performing these activities are minimised so far as is reasonably practicable.

- A buddy system is a cooperative practice of pairing two or more people together for mutual assistance and safety.
- This system of organising work ensures that a worker can always be seen or heard by at least one other worker and is subject to periodic checking of their safety while undertaking high risk work activities.

Situation where workers should generally not work alone include:

- in confined spaces
- where there is a risk of violence
- in laboratories where chemical substances are handled or housed
- in areas where power or hand-held tools are used
- in areas where moving machinery is used
- when working at heights
- when undertaking search and rescue or fire-fighting activities
- when driving long distances
- in any other place or situation where there is a significant risk of injury from the work being carried out which cannot be effectively controlled.

Personal protective equipment (PPE)

Where a hazard remains after the application of higher order control measures, provision of and training in the use of personal protective equipment (PPE) may be appropriate. PCBUs must assess the needs for particular work activities and ensure that workers are trained in the use of any required PPE.

Both PCBUs and workers should make sure that PPE:

- complies with Australian Standards
- is suitable for the intended purpose
- is in good condition
- has been adequately maintained.



Field work

Planning the trip

Field work refers to the activities of a job that occur in a remote or isolated work site as opposed to those undertaken in a controlled environment such as a worker's usual workplace, laboratory, or office.

Careful planning of any field trip (within Australia or overseas) is essential. PCBUs should ensure that a risk assessment is conducted for all instances of field work where there is an identified risk to the health and safety of workers.

Issues to consider include:

- purpose of travel
- size and composition of the field party
- personnel required to travel
- general health of the field party
- first aid officers and first aid resources
- emergency preparedness and emergency response strategy
- amount and weight of equipment required.

Selecting participants

The issues PCBUs should consider when trying to identify suitable workers to work remotely or in isolation include their physical and psychological health and the possible effect on that individual of fatigue, and any other personal and/or family matters that may influence or affect them.

Physical fitness

PCBUs should consider the level of physical fitness that will be required of the remote or isolated worker.

PCBUs should:

- conduct a thorough medical assessment, on appointment and before commencement of work, giving particular attention to any relevant pre-existing health conditions, for example, insulin-dependent diabetes, epilepsy
- consider annual check-ups for workers regularly engaged in remote or isolated work
- conduct risk assessments before commencement of all remote or isolated work.



Psychological fitness

Psychological assessments can be a valuable source of information and include measures such as psychometric testing or clinical interviews, tailored to suit the needs of individual organisations.

Psychological assessment can assist PCBUs to:

- identify potentially unsuitable candidates while maximising recruitment and placement of suitable individuals
- increase safety for individuals and others through the identification of vulnerabilities that may put personnel at risk when conducting remote or isolated work activities
- facilitate early intervention.

Modes of transport

Field trips and overseas travel may involve a range of transport modes. Whether travelling by air, sea or road, workers should, as part of the overall risk assessment process, obtain appropriate management approval and complete a trip plan prior to departure.

It is highly recommended that workers who are required to drive regularly as part of their duties attend four-wheel drive, defensive driving and/or advanced driving courses.

Additional training should be considered where workers are required to tow trailers or caravans. A combination of driver training and first aid training is recommended. Further considerations could include:

Protocol focus

- staff training and health checks
- trip planning and trip schedules
- vehicle fit-out
- pre-departure checks
- check-in procedures.

Staff training and health checks

- senior first aid
- defensive 4x4 driving
- manual handling
- equipment training
- cultural awareness training
- pre-employment self-assessment
- hepatitis vaccinations
- tuberculin skin tests.



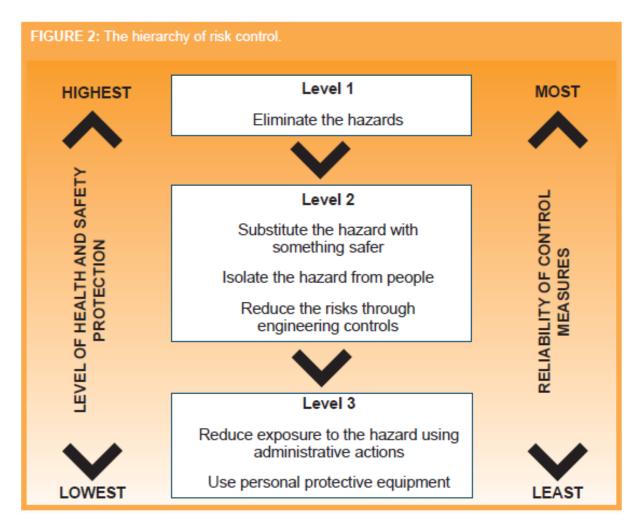
Appendix 1 - Risk management model



Caption: Risk management model sourced from the NT Code of Practice How to manage work health and safety risks



Appendix 2 - Hierarchy of risk control



Caption: Hierarchy of risk control sourced from the NT Code of Practice How to manage work health and safety risks



Appendix 3 - Heat stress

Heat stress is another risk, like fatigue, that is more prevalent with remote workers performing tasks in areas susceptible to high temperatures.

Heat storage occurs when symptoms of heat stress are unaddressed and ignored. It generally takes two to three weeks for a worker to become properly acclimatised to the temperature in which they are working. Furthermore, some prescribed medications can also lead to heat stress by inhibiting sweating or increasing heat load by stimulating metabolism.

Personal Protective Equipment (PPE)

In certain conditions, PPE has been responsible for increased body temperature and subsequent heat stress, having also been implicated in premature fatigue.

The increased body temperature due to certain PPE (such as fire fighting gear) can create a hot microclimate between a worker's skin and clothing. The early signs of this are clearly recognised at the individual level and ignoring them causes the continuation of heat stress symptoms which intensify. Inevitably the loss of voluntary body function can occur, requiring primary care.

Typical responses to heat storage when symptoms are ignored:

- narrowed focus
- increased risk of poor decision-making
- heat stress dementia (loss of memory)
- impaired brain function which can manifest in unusual behaviour, altered communication and even aggression.

Heat stress risk factors:

- worker not heat-acclimatised
- high ambient temperature
- high relative humidity
- low air flow
- highly motivated/time pressure
- illness
- dehydration
- smaller work groups.

Dehydration

- People can tolerate a two per cent reduction in body mass as a result of fluid loss, however, this needs to be replaced before the next working shift.
- In hot conditions doing manual labour, workers should consume six litres of water during the day and an additional 1 to 1.5 litres overnight.
- Electrolytes are important in maintaining hydration.



- Drink according to thirst.
- Drink what you prefer (within reason). If you feel like something sweet, your body might be in need of sugars.
- Communicate if you don't feel well.
- One litre per hour taken as 250 ml (a cup) every 15 minutes is better than trying to drink the whole litre at once.

Urinalysis

A simple and easy way to check how hydrated you are to check your urine. In hot climates, make sure you urinate several times during your work shift. Check the colour of your urine. The darker it is, the more you need to hydrate. The clearer your urine the better hydrated you are and you should strive to drink enough water to maintain that level.

Note some medications and multivitamins (such as vitamin B) can also alter the colour or your urine.

The following is a chart that serves as a good indicator of dehydration:

1		
2		
3		
4		
5		
6		
7		
8		



Appendix 4 - Driver fatigue

Driver fatigue is a risk that has been identified with remote workers who drive trucks and other vehicles.

The National Road and Transport Commission (NRTC) reported in research examining causes of road incidents that fatigue accounted for between five and 42 per cent of all truck accidents.

- Forty-two per cent of drivers in accidents on rural roads near Adelaide reported being fatigued prior to the accident.
- Thirteen per cent of rural road fatalities in Western Australia were assessed as due to fatigue.
- Five per cent of single truck crashes in Queensland were due to the driver falling asleep, half of which involved casualties.
- Sixty per cent of these occurred between 10.00 pm and 6.00 am.
- According to a Victorian Coroner's report, 9.1 per cent of all crashes are caused by fatigue (3.2 per cent articulated truck, 0.5 per cent rigid truck).

Basic Fatigue Management (BFM) - solo drivers

Time	Work	Rest
In any period of:	A driver must not work for more than a MAXIMUM of:	And must have the rest of that period off work with at least a MINIMUM rest break of:
61/4 hours	6 hours work time	15 continuous rest time
9 hours	81/2 hours work time	30 minutes rest time in blocks of 15 continuous minutes
12 hours	11 hours work time	60 minutes rest time blocks of 15 continuous minutes
24 hours	14 hours work time	7 continuous hours stationary rest time
7 days	36 hours long/night work time	
14 days	144 hours work time	24 continuous hours stationary rest time taken after no more than 84 hours work time and 24 continuous hours stationary rest time and 2 x night rest breaks and 2 x night rest breaks taken on consecutive days

Caption: Driving hours for BFM

Driving policy focus

It is recommended the PCBU develop a driving policy that includes the following.



Appendix 5 - Management of remote workers

There are a myriad of challenges for supervisors who manage remote workers. In a recent study, four challenges were identified in setting up remote workers in an environment that maximises productivity and health, safety and wellbeing. They are as follows:

One - Finding the right work-life balance

- Remote workers reported working longer hours and struggling to make personal time.
- Remote workers experience difficulty disengaging from work during personal time with the combined work/home environment. Behaviors such as checking the last email or voicemail before going to bed was common.

There are three key factors that inhibit work-life balance in remote situations. They are:

- 1. Absence of traditional boundaries (spatial, temporal and social) between work and personal life.
- 2. Volume of communication decreases for remote workers.
- 3. Necessity to over-perform and over-communicate due to lack of visibility.

Two - Set the tone on work norms

Conversations should be made surrounding the work-life balance habits of:

- working on holidays
- working weekends
- signing on and off at certain times
- when to carry work mobile phones.

Research further identified the need for managers to model appropriate work-life balance behaviors such as prioritising employee tasks. Managers also need to be active in the role they play when co-prioritising tasks with an employee. It was found that employees who feel there are no end-points to their work often feel all tasks have the same degree of urgency. Remote work is performed differently to traditional office work; frequent and varied types of communication are often required and time-management needs to be prioritised.

Three - Overcoming workplace isolation

- Employees who feel isolated report lower job satisfaction, organisational commitment and higher turnover. The lack of social presence in an office often leads to remote employees developing 'isolation perceptions' such as worthlessness in relation to work contribution.
- Perceptions become amplified as the typical social opportunities encountered in traditional offices are reduced. The study found that a 'lack of management action' was often a factor in workplace isolation.

Encourage employee pairing and mentoring (Also see: Buddy System)

Pairing remote employees with traditional office employees has been found to reduce the impact of adjusting to remote worker based change.



Check in informally

Managers who reduced effects of workplace isolation ensured high contact availability and were pro-active in ensuring feelings of isolation were as reduced as possible.

Facilitate entry for new employees

Managers can ease the way in which remote employees are on-boarded by encouraging existing team members to help, support and welcome new employees.

Four – Compensating for the lack of face-to-face communication

Remote workers predominantly communicate electronically. Naturally, the lack of real interpersonal conversation will have an impact on mental health.

Strategies that have addressed this issue include:

Arrange a meeting with new remote employees.

If a remote employee can put their manager's face to a voice it helps when feelings of isolation are reported.

Use technology.

Most government departments and businesses with remote workers can leverage their company's technology. Whether it's, conference calling or video conferencing, try to use these tools when communicating with remote workers.

Managing remote workers

'So, to increase your effectiveness and success as a remote leader, be deliberate about building relationships, identify people's communication preferences and use available vehicles appropriately, and lead your team appropriately through the stages of development.

A longitudinal study discovered that the most important questions from employers in relation to managing individual remote workers are:

- How can I get to know them when I haven't even met them face-to-face?
- How can I communicate effectively?
- How will I know when problems get out of hand?
- How can I delegate to them when I cannot easily check progress?
- How can I measure performance?

Furthermore, the longitudinal study deduced the ways to be successful in managing remote workers from a group development perspective.

This can be broken down into three categories:

- 1. Focusing on building and maintaining relationships.
- 2. Communicating appropriately.
- 3. Focusing on team performance.



1. Focusing on building and maintaining relationships

- Arrange a face-to-face meeting at the earliest opportunity—make relationship building the majority of the agenda. A lot of current literature speaks of significant pay-offs when relationship-building is a focus, particularly if this takes place early.
- Use time during conference calls to specifically focus on relationship building. For example, have each person share things such as: what they did for the weekend, week challenges, something they're proud of.
- Schedule regular one-on-one calls and ensure time is spent discussing non work-related topics.

Moreover, other research in this area has identified several powerful questions for work-related topics. They are:

- What obstacles are you dealing with?
- What are you learning, and what skills are you developing?
- What work are you enthusiastic about?
- What can I do to help you succeed?

2. Communicating appropriately

It's important to understand communication preferences for remote employees. The only way this can be done is to ask the appropriate questions, such as:

- What's your preference for being contacted generally? (Email, phone, instant messaging)
- What is your preferred telephone for phone calls? (Mobile, land line)
- Do you have a voicemail and if so, where? (Mobile, land line)
- How should I contact you if something is urgent?

3. Focusing on team performance

The dynamics of team development is a popular and well-known theory encompassing four stages. This theory was originally proposed by Bruce Tuckman. The stages apply differently to remote workers than for those in regions or cities—components of the stages are often either amplified or diminished. Understanding this popular theory of group dynamics provides a foundation to manage remote workers.

The stages in Tuckman's theory are: Forming, Storming, Norming and Performing.

Forming

The forming stage sets the standard for the team. The strategic organisational goals, individual roles and organisational hierarchy are understood during this stage.

The issue with remote workers is that they don't have the same opportunities to form groups, communicate and experience this stage.



This can be negated by management ensuring remote teams come together with other colleagues, and that the agenda specifically focuses on key questions, including:

- What does the organisation do?
- Why does the organisation do what it does?
- How do all the workers fit in?
- What are the workers' individual roles?
- How do individual workers' roles relate to organisational goals?

Storming

The 'storming' stage encompasses the natural tendency for competitiveness and opposing personalities to clash during group building. Teams spend most of their energy during this stage and the inherent risk is conflict. A combination of different methods of communication and remoteness can cause acute conflict to go undetected and escalate. Visibility of conflict from managers is difficult with remote workers as managers often have fewer conversations and lack of typical face-to-face social cues such as body language.

Norming

The norming stage is one of productivity. When this stage is reached, all workers have agreed on a mutual plan in the best interests of team functioning. Ideas will often be abandoned, and others agreed upon. This stage is the proverbial 'springboard' into the highly productive 'performing' stage; it can also be a stage where employees experience disgruntlement or disagreement reverting back to the storming stage. This can be and often is the final stage for working groups.

Performing

The performing stage is the ideal stage for a working group to reach. High performing teams at this level are able to function as a unified group and always find ways to achieve organisational goals smoothly and effectively without inappropriate conflict and needing managerial oversight. Team members during this stage are competent, motivated and autonomous.

Remote workers who are managed well and have been involved in forming a team that has reached this stage often don't find remoteness to be a concern or limiting factor. Research suggests that teams who have reached this level have heavy management participation that is democratic and inclusive. The additional challenge here is to keep a 'performing' team and not revert back to the 'storming' phase which can result from challenges involving change management. For example, if a team experiences a restructure then it can often revert to 'storming', as new staff challenges existing norms and team culture.

The two most important things to consider during this phase are:

- Be deliberate about building relationships.
- Focuses on empowering the team, then get out of the way.



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