Meridian Critical Health & Safety Risks Control Standard

Meridian

Contents

About this Standard

Some of the work we do at Meridian can cause significant injury or fatality. The risks associated with this work are called Meridian's Critical H&S Risks.

This Standard defines the mandatory controls for managing the work where a Critical H&S risk may be present. It ensures compliance with the Health and Safety at Work Act 2015 (HSWA), WorkSafe guidelines and associated standards and best practice.

Application and scope

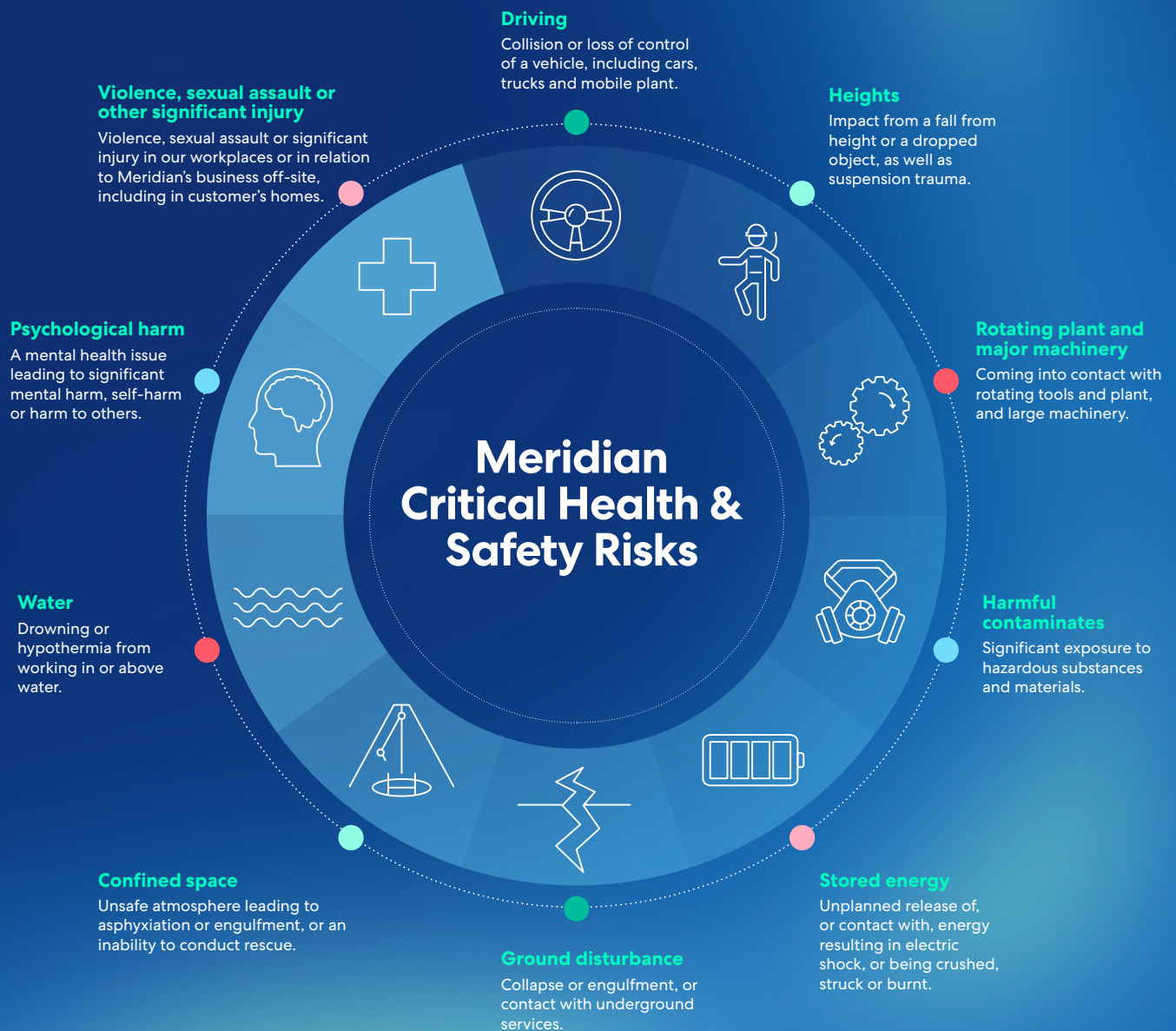This Standard must be followed by any person conducting work under the control of Meridian.

If there is a variation away from the controls outlined in this Standard, e.g. by a contractor undertaking work for Meridian, the variation must be of equal or greater control and must be agreed to by the Meridian manager of the contract prior to work commencing.

This Standard should be read in conjunction with the related Meridian Standard Operating Procedures, Work Control Procedures and Work Orders, as well as related guidelines from WorkSafe, Electricity Engineers' Association, MBIE and StayLive.

Responsibilities

- Meridian, as a PCBU under the Health & Safety at Work Act 2015, is responsible for ensuring that all reasonably practicable controls are implemented to keep our people, our contractors, members of the public and visitors safe when on a Meridian-controlled site.

- Meridian's Health & Safety Team is responsible for ensuring that this Critical H&S Risks Standard is regularly reviewed, kept up-to-date and available via the Meridian intranet – Electric Avenue.

- Meridian's Site Owners, People Leaders (including Team Leaders), Project Managers and Construction Managers are responsible for ensuring that:

  - this Critical H&S Risks Standard is communicated and understood by all staff and contractors working in their area of responsibility, and

  - visitors to Meridian sites are informed of significant hazards where these Critical Risks may present, and the controls in place to eliminate or minimise harm.

- Meridian staff and contractors are responsible for taking the time to understand this Critical H&S Risks Standard and adhere to the controls within, or seek help if they're unsure of anything.

The following are Meridian's Critical Health & Safety Risks. The list below doesn't represent all the risks present within Meridian. All work that may present risk to our employees, contractors or visitors, must be assessed and risks eliminated or minimised as far as is reasonably practicable. This is a requirement by law under Section 30 of the Health and Safety at Work Act.

Meridian Critical Health & Safety Risks

Driving
Collision or loss of control of a vehicle, including cars, trucks and mobile plant.

Heights
Impact from a fall from height or a dropped object, as well as suspension trauma.

Violence, sexual assault or other significant injury
Violence, sexual assault or significant injury in our workplaces or in relation to Meridian's business off-site, including in customer's homes.

Rotating plant and major machinery
Coming into contact with rotating tools and plant, and large machinery.

Psychological harm
A mental health issue leading to significant mental harm, self-harm or harm to others.

Harmful contaminates
Significant exposure to hazardous substances and materials.

Water
Drowning or hypothermia from working in or above water.

Stored energy
Unplanned release of, or contact with, energy resulting in electric shock, or being crushed, struck or burnt.

Confined space
Unsafe atmosphere leading to asphyxiation or engulfment, or an inability to conduct rescue.

Ground disturbance
Collapse or engulfment, or contact with underground services.

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General Critical Controls – applicable to all Critical H&S Risks

While many controls are specific to the risk, some of our key controls are applicable to all of our Critical H&S Risks. These are:

Planning. All work involving a Critical Risk must be planned. Planning must include those involved in the work as well as Subject Matter Experts (SMEs) where necessary, to identify tasks, how each task will be carried out, potential dangers and to implement strategies to mitigate risks.

Risk Assessment. Risk assessments are a standard pre-work process used to identify, assess, and control hazards and risks, regardless of job size. The assessment process is adaptable, ranging from a 'Take 5' assessment to a Job Safety Analysis (JSA), a comprehensive Worksite Safety Plan (WSSP) or a Safe Work Method Statement (SWMS); higher risk levels typically require more detailed risk management procedures. For work involving Critical Risks, a WSSP or SWMS is generally necessary.

Communication and consultation. All staff involved or affected by work with a Critical Risk must be consulted to ensure everyone understands the risks and controls. This typically happens during pre-start meetings, safety planning, or task analysis. If the public, neighbours, landowners or lessees may be impacted, they must also be consulted.

Managing psychosocial risk, Psychosocial risk factors, such as high workload, tight deadlines, or personal conflicts, can lead to stress, anxiety, or physical injury, impacting job performance and safety. Leaders must identify and manage these risks wherever possible.

Qualifications and competency. All those involved in the task must hold the required and up-to-date qualifications and competencies required to carry out the task. These should be checked by the person leading the work. A person's comfort and confidence level with undertaking the task must also be discussed and considered.

Fatigue management. Fatigue can arise from both workplace and personal factors and must be proactively identified and managed. This is a shared responsibility between management and workers through good planning and discussion with those carrying out the task. Refer to Meridian's Fatigue Management Guideline.

Drug and Alcohol Testing. Meridian conducts targeted and random drug and alcohol testing to ensure workplace safety. See Meridian's Drug & Alcohol Policy for details.

Up-to-date Risk Register. Every site or project must maintain a Risk Register that lists hazards, risks, and mitigation measures, and share it with all involved personnel.

Reporting. All safety events, including near misses, hazards, and observations must be reported in Meridian's Mesh tool to ensure visibility and support health and safety improvements.

Ability and confidence to Stop Work. Every person has the right to refuse to do unsafe work and/or stop work if they feel it poses and imminent or immediate threat to their health or safety.

Driving

Collision or loss of control of a vehicle.

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Examples of where this Critical Risk might be present:

- Meridian staff or contractors driving while undertaking work for Meridian (including cars, trucks, mobile plant).
- Vehicles (cars, trucks, buses, mobile plant) on a Meridian site for a work activity or event.
- A member of the public driving in close proximity to a Meridian work site or asset.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk of driving:

Engineering controls

Vehicle must be fit for purpose. A vehicle is deemed "fit for purpose" when it is in a condition that ensures safe and reliable performance of its intended functions. This encompasses possessing the appropriate weight rating, necessary features such as four-wheel drive where applicable, and supplementary safety measures including safety cages or parcel trays for transporting tools and equipment. Additionally, the vehicle must be free from mechanical faults or significant damage that could compromise its usability or safety.

Vehicles purchased by Meridian must be 5-star ANCAP Safety Rated. Safe vehicles help prevent crashes or lessen their severity, and offer greater protection in accidents.

All Meridian fleet vehicles must have GPS. In-vehicle GPS facilitates the monitoring of safe driving behaviours such as speed and abrupt braking or acceleration, and enhances emergency response by providing accurate vehicle location information.

Only drive when needed. Some travel can be eliminated through the use of online meetings; consider if travel is necessary.

Minimisation controls

Drivers must follow New Zealand's Road Rules at all times. This includes safe manoeuvring, following speed limits, using seatbelts, and not using cell phones while driving.

All drivers must be trained and competent to drive. Drivers must hold a valid license, and those operating specialty vehicles like ATVs, trucks, forklifts, or mobile plant must also be competent and experienced.

Driver must be fit to drive. Drivers on company business or operating Meridian vehicles must not be under the influence of drugs or alcohol and must avoid driving while fatigued. Plan long trips with sufficient rest stops.

Vehicle safety check must be undertaken by the driver. Before driving, inspect tires, lights, wipers, mirrors, brakes, steering, fluid levels, and indicators to ensure vehicle safety. Keep windscreens clean and clear, especially to prevent sunstrike.

Good travel planning is important to managing both fatigue and battery life (for EVs). Plan ahead by checking weather, driving only during daylight when possible, and managing fatigue—avoid long trips after work, especially if your workday exceeds 14 hours (see Meridian's Fatigue Management Guidelines); consider staying overnight instead. When planning your route, ensure enough EV charging stops are available; otherwise, use another vehicle, as cold weather and terrain can reduce battery range.

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Signage and barriers are required on Meridian sites. Clearly mark significant hazards to drivers or vehicles at Meridian sites with signs or warnings. Use signs and barriers to separate vehicles and pedestrians when collision risks exist, designating safe operating areas for mobile plant only. Install barriers or edge protection where there is a risk of falls from height involving drivers or vehicles.

Warning systems must be used if present for mobile plant. Ensure mobile plant warning systems (horns, reverse alarms, halo lights) are working and in use. Use spotters when collision risks exist.

Traffic Management Plan (TMP) is required for works impacting on traffic. A TMP, approved by the local authority, is required whenever a Meridian activity or external work significantly impacts normal road operations.

Seatbelts are required. Drivers and passengers must wear a seatbelt at all times when using a vehicle or mobile plant if a seatbelt is fitted.

Sunvisors should be used and sunglasses should be worn. To reduce the risk of sunstrike and glare, drivers must use a vehicle's sunvisor and/or sunglasses when the risk is present.

Further information and relevant standards that apply for managing the risk of driving:

- Meridian's Vehicle Use Guideline
- Meridian's Fatigue Management Guideline
- New Zealand Driving Road Code
- WorkSafe Managing work site traffic – Good practice guidelines
- NZTA's NZ Guide to temporary traffic management

Critical Questions to consider

- Are you competent and do you feel comfortable operating the vehicle for the task and environment today?
- Are you safe to drive?
- Is the vehicle appropriate for the conditions and task?
- Have you planned your trip and let people know your plans?
- Are there are any specific details of the vehicle which may create unexpected hazards if crashed and do you know how to respond? (e.g., batteries in electric and hybrid vehicles)?
- Are loads properly secured?
- Will the load affect the vehicle handling?
- Are trailers and other attachments correctly attached?
- Are there any distractions which can be eliminated?
- How could the road conditions and weather forecast impact the journey?
- Have we checked the NZ guide to temporary traffic management to determine if a traffic management plan is required?
- Are there areas around the work site where people and vehicles are in close proximity to each other?
- Are there blind spots, areas where sunstrike might occur, tight corners, low light areas, or other areas of poor visibility? What can be done to mitigate these risks?
- Are there any natural hazards near vehicle operating areas such as bodies of water or steep drop-offs?

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Heights

Impact from a fall from height or a dropped object, as well as suspension trauma.

Examples of where this Critical Risk might be present:

- Meridian staff or contractors working on any type of elevated work platform (including scissor lifts, boom lifts and man cages), on ladders, accessing scroll cases and headgate slots, and working up a wind turbine.
- When tools, equipment or other objects are being lifted, carried or held at height.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk of working at height:

Engineering controls

Whenever possible, height work should be eliminated by lowering the task to the ground or seeking alternative methods. Prioritise ground-level tasks, use extendable tools or drones, and lower structures when possible for maintenance or assembly.

Fall protection is required whenever there is the potential for someone to fall from height. Fall protection includes barriers, guardrails, edge protection, or restraint/arrest systems that must meet load requirements and be installed per manufacturer guidelines. A top guardrail (900–1100mm), mid-rail (450mm), and toe board are required for barriers. Anchor points should be selected and inspected carefully. Netting or coverings to prevent falling objects should be considered in risk assessments.

Fall restraint or arrest systems must be "fit for purpose". Equipment must meet manufacturer's requirements, withstand applied forces (including at anchor points), and be properly maintained. Fall restraint or arrest systems must be installed as designed and display a current and in-date inspection tag/label. Only trained and competent individuals may use fall-protection equipment.

The risk of dropping tools and mobile phones from height must be eliminated. All tools and mobile phones must be tethered or contained when there is a risk of a drop from height. During transit to elevated areas, tools and mobile phones are to be either contained or tethered. Tethers must comply with ANSI/ISEA 121-2018 standards or, alternatively, possess an EU Certificate of Conformity.

All new ladders, stairs, walkways and scaffolding must conform to AS/NZS 1657, AS/NZS 1892 and AS/NZS 4576. Existing infrastructure shall be assessed and brought up to current standards where reasonably practicable; all new equipment must display a current and in-date inspection tag/label.

The minimum safe distance from live overhead power lines is 4 metres. This applies to people, tools, and equipment. If work needs to be done closer than 4 meters, a Close Approach Consent is required from the network operator.

Minimisation controls

All work at height must be shared and discussed at the pre-start meeting. All those working at the worksite must be made aware of the height work being carried out that day and the drop/exclusion zones in place.

A drop zone must be in place when work is being carried out at height and the risk of falling is present. A drop zone is where access is forbidden. It must include a barrier to prevent access, and signage.

Establishing an exclusion zone may help to restrict access further. An exclusion zone can be established beyond the drop zone and further limits access to high-risk work areas, allowing only authorised personnel. It requires barriers and signage.

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Those using a fall restraint system must either follow the guidance and specifications within the Wind Turbine Safety Rules (WTSR) or obtain a Work at Height certificate. The certificate must be issued from an authorised person at the site. Contractors can't issue a Work at Height Certificate and they can't be self-issued.

Emergency rescue procedures are required for all work at height. Maintain an emergency rescue procedure for fall victims that is tested annually. Prepare and discuss a rescue plan with all participants before any work involving fall-arrest systems, ensure availability of others who may be involved in the rescue, and assign a trained, competent rescue supervisor.

PPE is appropriate and certified. Any PPE used for heights work, including ropes, harnesses and helmets, must be appropriate for the intended use, regularly inspected (including immediately prior to use) to ensure there are no obvious signs of degradation or weakness, and display a current and in-date inspection tag/label.

Specific guidance for Mobile Elevating Work Platforms (MEWPs)

The following controls relate specifically to the safe operation and management of Mobile Elevating Work Platforms (MEWPs).

- MEWPs are to be operated by individuals who are trained and competent, following the manufacturer's instructions and Meridian's competency requirements.

- MEWPs are used for their designated purpose, with attention to platform weight and load limits, terrain conditions, and other design specifications.

- Regular maintenance is required for MEWPs, along with an inspection certificate signed by a qualified inspector certified by the Certification Board for Inspection Personnel (CBIP).

- All electrical MEWPs are tested and tagged in accordance with AS/NZS 3760.

- Additional requirements apply to MEWPs used for specific types of work, such as ECP46 for high voltage live work and the EEA Guide for Live Low Voltage Electrical Work.

- A current log book must be maintained for all MEWPs at any site.

- Operators must inspect MEWPs before use with a pre-start checklist; any identified faults should be rectified prior to operation. The checklist covers tyre pressure and condition, fuel, water and oil levels, brakes and hydraulic lines, communication systems, emergency controls, and safety equipment.

- Individuals in an MEWP basket are required to wear appropriate fall-protection equipment at all times, and procedures must be in place to prevent tools and equipment from falling. Tool trays are to be kept inside the MEWP and secured to the floor.

- No one may enter or leave the MEWP when it is elevated, except in an emergency, unless each of the following conditions are met:
  - Risk analysis shows that this alternative means of access is safer than all other alternative means.
  - The risk analysis is signed and approved by the work supervisor.
  - The structural adequacy of the landing area has been established, and the landing area is clear.
  - Where the landing is at the edge of a structure, the maximum gap between the MEWP and the landing shall not exceed 100mm and the MEWP shall be secured to a suitable point on the landing.
  - Access and egress shall not take place unless a safety harness is properly worn and attached at a suitable point on the structure.
  - The base controls for the MEWP shall be tagged to indicate the equipment is in use and to caution against interference.

Further information and relevant standards that apply for managing the risk of working at height:

- JSA 904: Working at Height and JSA 907: Use of Mobile Elevated Work Platforms.
- Meridian's Wind Turbine Safety Rules (WTSR)
- WorkSafe Working at Height – Good practice guidelines
- AS/NZS 1657:1992 Fixed platforms, walkways, stairways and ladders – Design, construction and installation.
- AS/NZS 4576:1995 Scaffold Guidelines.
- AS/NZS 1892.5:2000 Portable ladders – Selection, safe use and care.
- AS/NZS 1891.4:2000 Industrial fall-arrest systems and devices.
- MBIE's Best Practice Guidelines Mobile Elevated Work Platforms.
- MBIE's Best Practice Guidelines for Scaffolding in New Zealand.
- EEA's Guide to the Use of Personal Fall-Arrest Systems
- EEA's Guide for ESI Use of Mobile Plant.

Critical Questions to consider

- What other means of safe work access have been considered that would eliminate the hazard (e.g., scaffolding, elevated work platforms)?
- How has competence been demonstrated?
- How was the exclusion zone determined and controlled, and are all access points identified?
- Is there any way objects can fall outside the exclusion zone?
- Who is required to be in the exclusion zone and how are you managing their risk?
- What will prevent tools or equipment from falling (e.g., boards, plates, tethers, covers)?
- Is fall restraint or fall arrest most appropriate?
- Are all the people familiar with the rescue equipment, and is it available or set up at the worksite?
- Has the rescue plan been rehearsed?

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Rotating plant and major machinery

Coming into contact with rotating tools and plant, and large machinery.

Examples of where this Critical Risk might be present:

- Meridian staff or contractors working in close proximity to turbines or high-powered rotating tools such as drills, saws and grinders.
- When machinery such as cranes, diggers, forklifts, telehandlers and electric hoists are being used.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from rotating plant and major machinery:

Engineering controls

Equipment and machinery must be fit for purpose. "Fit for purpose" means the tool is suitable, safe, well-maintained, in good condition, and used as intended.

Barriers and guardrails must be used wherever possible. Always use manufacturer-installed guarding. If a barrier or guard is removed for maintenance or cleaning, replace it before resuming normal operation. Regularly inspect all barriers and guards for effectiveness.

Emergency Stops, when installed, must be available and in operation at all times. Emergency stops should be maintained to ensure immediate shutdown of machines when activated, regularly inspected, tested, and operated per manufacturer guidelines.

Minimisation controls

All work involving rotating plant and major machinery must be risk assessed. This includes competent people reviewing the tasks and the type of plant required during the worksite safety planning stage.

Pre-start planning with all workers involved in the task is required. Assess ground conditions, plant or machinery placement, and address emergency stop and rescue procedures.

Manufacturer's instructions must be followed. Only use rotating plant and major machinery for their intended purposes during installation and operation.

All inspections and certifications must be current. In addition, all plant purchased from overseas must comply with New Zealand standards.

Separation and exclusion zones should be in place. Wherever possible, people must be separated from rotating plant and major machinery.

Isolations should be put in place whenever possible. Only trained personnel should use lockout/ tagout procedures when installing, maintaining, repairing, or cleaning rotating machinery.

Training and competency required for the job is checked for those involved in the task. Employees must be properly trained to operate mobile plant and related equipment safely. Contractors need approval from the Site Owner or supervisor before using Meridian-owned equipment.

PPE is appropriate and certified. PPE includes hard hats, gloves, safety footwear, eyewear, and high-visibility clothing. A risk assessment is conducted to determine which PPE is suitable when working with rotating equipment and major machinery. PPE is inspected regularly, including before use, to check for signs of degradation or weakness, and must be certified.

Additional PPE is required when working with welders and gas cutting. This includes flame retardant overalls and leather chaps.

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Further information and relevant standards that apply for managing the risk from rotating plant and major machinery:

- WorkSafe Safe Use of Machinery – Good practice guidelines
- Meridian PPE Guidelines.
- Meridian's Wind Turbine Safety Rules
- Meridian's Rotating Plant SOP

Critical Questions to consider

- Where will other site workers, site visitors or the public approach from and what will stop them walking into blind spots of rotating plant or major machinery?
- What other work parties, activities or environmental conditions within the area may increase risk?
- What are the ground conditions like?
- How could the weather impact the activity?
- Is the ground capable of supporting the load of the vehicle?
- Have you considered the presence of anything underground which may affect the ability of the ground to support the load?
- Is the equipment and work method appropriate for the load or reach required?
- Is a safety observer required?
- What are the agreed protocols for communicating with plant operators when working in their work zone?

Harmful contaminants

Significant exposure to hazardous substances and materials.

Examples of where this Critical Risk might be present:

- Breathing in pollutants such as fumes, chemical vapours, dust and fibres (including asbestos).
- Drinking water contaminated with harmful chemicals or bacteria, viruses, and parasites like E. coli, Giardia, and Cryptosporidium.
- Working with or near flammable gasses or liquids.
- Other significant exposure to hazardous gases, liquids and solids.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from harmful contaminants:

Engineering controls

Harmful contaminants should be removed from Meridian offices and sites when safe and practicable. This is not always possible when needed for works, and may sometimes introduce new risk, e.g. the rupture of asbestos.

If not safe to remove completely, harmful contaminates, including flammable, should be isolated wherever possible. Isolating harmful contaminants involves preventing or limiting migration and exposure.

Non-hazardous alternatives must be used where possible. Alternatives to harmful contaminants that are fit for purpose should be explored and used wherever possible

Minimisation controls

Registers / Safety Data Sheets must be used where required. The location and awareness of the Safety Data Sheets (SDS) must be communicated to everyone on site. Signage and labelling must be in place.

Safety Data Sheet protocols (use, storage, transport, disposal) must be followed. All people interacting with harmful contaminants that have a corresponding SDS must follow its protocols.

Fire extinguishers should be readily accessible. The appropriate fire extinguisher for the hazard class (as defined in the SDS) should be on hand available for use and staff trained in their use.

Monitoring is required. The type and quantity of hazardous substances should be identified and monitored, with 5-year audits conducted. Records of exposure to hazardous substances are maintained in the H&S system.

Training and competency required when using harmful contaminants is checked for those involved in the task.

PPE is appropriate and certified. PPE may include gloves, eyewear, masks and overalls. A risk assessment must be carried out to determine which PPE is appropriate when working with hazardous contaminants. PPE must be regularly inspected (including immediately prior to use) to ensure there are no obvious signs of degradation or weakness, and certified.

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Further information and relevant standards that apply for managing the risk from rotating plant and major machinery:

- WorkSafe Safe Managing Hazardous Substances – Good practice guidelines
- Meridian Asbestos Management Plan

Critical Questions to consider

- Have all hazardous substances or materials been identified? Is there Safety Data Sheet for them?
- What are the risks identified for this substance and have you referred to the Safety Data Sheet?
- How is the substance you are working with managed?
- How is the risk communicated to workers?
- What specific PPE is required (e.g., right material, grade)?
- Are there any special emergency requirements and are they on hand?
- Are lines, vessels and containing equipment (use or application) appropriately rated, compatible with the substance, and in good condition?
- Are there printed SDS sheets for all relevant substances held on site?

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🔋 Stored Energy

Unplanned release of, or contact with, energy resulting in electric shock, or being crushed, struck or burnt. This may include arc flash, lightning strike, hot works or a high-pressure release of oil or water.

Examples of where this Critical Risk might be present:

- Working under permit or on or near equipment that is in-service.
- Working with equipment containing stored energy or equipment under tension.
- A disconnection, reconnection or decommission of electricity at a customer site.
- Activity such as welding, cutting, grinding, soldering, brazing etc, that involves a source of ignition, such as open flames, sparks, or heat (i.e. hot works).
- Working in an exposed area during a lightning event.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from stored energy:

Engineering controls

Lock out/tag out procedures must be used to isolate energy sources. Prior to work being undertaken, all energy sources must be isolated, managed under the applicable permit and proven safe.

Eliminate or control ignition sources. Ignition sources must be managed by focusing on preventing sparks, controlling heat, and maintaining equipment regularly.

Install over-pressure protection, isolation and shut-off valves wherever practicable. Good system design includes safety features to eliminate the risk of a sudden release of stored energy.

Isolate hazardous areas where possible. Utilise remote controls/remote switching, barriers, guardrails and 'safe zones' wherever practicable to create distance from the hazard.

Minimisation controls

Drivers must follow New Zealand's Road Rules at all times. Risk Assessments and pre-start meeting are required. All those working with stored energy must participate in a pre-start planning meeting to ensure all risks are understood and controls discussed.

An emergency response plan must be in place. First aid and rescue procedures must be reviewed and understood by all those involved prior to work commencing.

Procedures must be followed under Permit to Work (PTW) system. When working under a permit, all hazard management systems and protocols must be followed.

All work must be undertaken by suitably qualified and competent personnel. This includes appropriate qualifications for all electrical work, and comprehensive training for those working with stored energy including hot works and high pressure fluids.

There must be signage in all arc flash areas. Signage should include information on available short circuit level, system voltage, protection boundary and PPE requirements.

Notification and signage is required. When working in close proximity to live wiring, notification and signage must be used to inform those working in the area of the risk.

Testing and tagging of electrical tools is required. Testing and tagging of electrical tools/equipment must be performed by an approved person who holds the appropriate qualifications.

Correct tools and equipment must be used. When performing any electrical work, tools and

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equipment must be in good condition, inspected, tested and tagged/certified.

Licensed electricians must undertake all disconnections, reconnections and decommissions. Confirmation must be provided that the site is no longer live (for disconnections and decommissions).

There must be real-time monitoring of lightning when working at height outdoors. Data and visual weather observations should be used and shelter must be sought for impending lightning storms.

Overhead and buried services must be identified. Services must be identified before any work, especially digging or work near power lines, begins. This should involve consulting service owner plans, gaining a Certificate to Excavate where required, visual identification of above-ground indicators, and, if necessary, using electronic location devices and hand-digging to confirm exact locations.

Procedures for high-pressure fluids must be clear and understood. These handling procedures must include work procedure, PPE, inspections and proper training for workers.

PPE is appropriate and certified. PPE may include gloves, eyewear, masks and overalls. A risk assessment must be carried out to determine which PPE is appropriate when working with stored energy. PPE must be regularly inspected (including immediately prior to use) to ensure there are no obvious signs of degradation (e.g. fraying, tears, holes) or weakness, and certified.

Arc flash-specific PPE must be worn when working arc flash marked areas. Arc flash PPE includes Cat 2, 3 or 4 PPE; see PPE Standard Operating Procedure for more details.

Further information and relevant standards:

- WorkSafe Energy Safety – Good practice guidelines
- Meridian PPE Guidelines
- Meridian Lightning Procedures (Wind and Hydro)

Critical Questions to consider

- How is the stored energy appropriately isolated?
- Has energy been released prior to permit issue?
- Has the isolation been tested and verified?
- How do you verify you are working on the correct equipment?
- What is the proximity of work to energised electrical equipment; can we increase this proximity?
- How are overhead or buried services in the area identified?
- Can the equipment you are working on be livened in any other way?
- What is the arc rating of your PPE and is it appropriate?
- Are your undergarments made of natural fibres?
- What is the minimum approach distance for the voltage you are working near?
- Have you considered (before drilling, cutting or digging) the potential for live equipment to be encountered?
- Have we reviewed our processes to provide assurance that we're managing our customers' disconnections, decommissions or reconnections well?
- Have we audited our signage around our electrical hazards that represent significant risk to the public?

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Ground disturbance

Collapse or engulfment, or contact with underground services (including electricity cables, gas pipes, water mains, sewer lines, and telecommunication cables).

Examples of where this Critical Risk might be present:

- Any situation where the surface of the ground is broken or penetrated by a tool. Penetration includes all types of excavation as well as digging and driving in or removing tools, stakes, posts or other objects below the surface of the ground.

- Other work that may involve ground disturbance such as road grading and erosion sediment control.

- When anyone is required to work within a dug-out area of ground or hole where free-flowing solids or a rising level of liquid may cause collapse, suffocation or drowning.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from ground disturbance:

Engineering controls

Where possible, essential services must be isolated prior to work starting. Services should be isolated when the work is in close proximity, e.g. within 3 metres of electrical conductors, or closer than two metres to any cables, gas transmission or high-pressure pipelines.

A pre-excavation survey using pipe and cable locating equipment must be undertaken prior to any trenching or excavation works unless the exact location of utilities is already known.

- Pot holing using non-destructive means must be undertaken prior to trenching or excavation works that are within 5 metres of services. Non-destructive excavation includes hydrovac or a manual system (hydro excavation should always be a preferred method when locating live services and requires a non-conductive nozzle to be used and earthing of the equipment).

- Excavation within two metres of underground infrastructure must be carried out using a hand-operated excavation tool. Crow bars or picks are not to be used. Hand digging involves digging with a shovel or electrical jack hammer with a spade bit only.

- Any excavation within six metres of any power pole or stay wire of a power pole may require written consent of the pole owner before any ground disturbance is undertaken.

To prevent instability, advice of a Geotechnical Engineer must be sought wherever there is risk of ground collapse. Shoring/benching and battering must be installed and implemented as per geotechnical design.

All excavation sites require an exclusion zone. This prevents unauthorised access into the area (by people and/or animals) and must include an adequate barrier around the excavation site. Barriers must have signage and be at least 1 metre from the edge of the excavation (regardless of depth). The exclusion zone must remain as long as the risk of falling in remains.

Safe access/egress into excavations must be provided. This can include a ladder, ramp or other safe access point. This is a crucial to prevent falls and make it easier for workers to enter and exit the excavation, especially in emergencies.

Bridging over excavations must allow for safe crossing. Where employees are required or permitted to cross over an excavation, a walkway or bridge with standard guard rails is required. Toe boards are also required to protect people working below.

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Controls are required to prevent falling objects into deep excavations. Controls must prevent objects from falling onto workers within the site and may include exclusion zones, trench box sheets extending beyond the trench depth, covers, guard rails and toe boards.

Minimisation controls

Site Owners must be notified. Site Owners must be consulted regarding any planned ground disturbances and notified prior to the work starting.

Any ground disturbance or penetration of ground more than 300mm requires a Certificate to Excavate. Once this certificate is obtained there must be trained and experienced person/s in charge of authorising digging.

WorkSafe must be notified 24 hours in advance of people conducting hazardous work. This includes if people have to work in an excavation that is more than 1.5 m deep and which is deeper than it is wide at the top, if people need to work in any kind of excavation where there is ground cover overhead, or if people have to work in an excavation in which any face has a vertical height of more than 5 m and an average slope steeper than a ratio of 1 horizontal to 2 vertical.

Services must have visual identifiers to alert workers of their location. Physical protection is required if there's a risk of collision from mobile plant, e.g. enclosures, cable trays or bollards.

When working within minimum approach distances (MADs) of essential services, additional requirements must be followed. This includes consulting with Site Owner, following Work Authority processes and using a spotter.

A safety observer is required for more substantial excavations. If the risks associated with the excavation are deemed as high, then a safety observer is recommended.

Regular inspections must be conducted. Inspections confirm the excavation's integrity.
At a minimum, these should be undertaken daily before starting work, and following any extreme event such as high rainfall, earthquake or seepage.

Excavated soil must be placed away from the edge of the excavation site. All excavated material must be placed at least 0.6 m away from the edge to prevent cave-ins and potential injury to workers. The stability of the area where the excavated soil will sit must be assessed as capable of withstanding the increased load.

An effective communication system should be in place. A shared understanding and agreement based on two-way acknowledgement between mobile plant operators and ground personnel must be established before work begins.

Persons working in the vicinity of mobile plant must wear high-visibility clothing. Gloves, masks and eyewear should also be worn.

A rescue plan must be in place and understood by all before work begins. A rescue plan for an excavation site must focus on both the safety of trapped individual(s) and the rescuers. A safe egress must be in place, rescue equipment and First Aid must be accessible at the excavation site, and emergency procedures must be understood by all.

Further information and relevant standards:

- WorkSafe Excavation Safety – Good practice guidelines

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⚠ Critical Questions to consider

- Have all services been identified, communicated and controlled.
- Where will people (including members of the public) and potentially stock approach from and what will stop them walking into the excavation site?
- What other work parties, activities or environmental conditions within the area may increase risk?
- What are the ground conditions like and is the methodology suitable?
- Is the equipment and/or excavation method appropriate for the ground disturbance required?
- Is a safety observer required?
- What are the agreed protocols for communicating with plant operators when working?
- Is there safe egress for excavations?
- What's our rescue plan?
- Could the excavation impact emergency services access to other areas?

✷ Meridian

Confined space

Unsafe or toxic atmosphere leading to asphyxiation, poisoning, fire, or an inability to conduct rescue.

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Examples of where this Critical Risk might be present:

When Meridian staff or contractors are required to enter or work in an enclosed or partially enclosed space that is not intended or designed primarily for human occupancy, and where there is a risk of one or more of the following:

- An oxygen concentration outside the safe oxygen range.
- A concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation.
- A concentration of flammable airborne contaminant that may cause injury from fire or explosion.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from confined space:

Engineering controls

Do not enter unless necessary. Entry must be eliminated if the task can be performed from outside the space.

Isolate contaminants and moving parts. Prevent accidental introduction of materials (e.g. steam, water or bulk materials that may come through piping, ducts and vents, etc). De-energise, lockout or tagout machinery in or near the confined space.

Clean and purge the confined space if necessary. Use a suitable cleaning method to remove harmful solids or sludges. Purge with fresh air to remove harmful gases or vapours (do not use oxygen).

Test and monitor the atmosphere. Atmospheric testing is mandatory for oxygen, flammable gases, and toxic contaminants. Where possible, carry out testing without entering the confined space. Detection equipment must be correctly calibrated at regular intervals.

Use forced ventilation if contaminants are present. If not feasible, use supplied-air breathing apparatus.

An exclusion zone is required when work is carried out in a Confined Space. This exclusion zone must include an adequate barrier around the space.

Safe access/egress must be provided. This can include a ladder, ramp or other safe access point. This is a crucial to make it easier for workers/rescuers to enter and exit the Confined Space.

Minimisation controls

Confined Space work requires a Confined Space Entry Certificate. This certificate is a written authority to conduct work in a Confined Space as well as a safety checklist. It is essential before entering the space.

An effective communication system must be in place. A shared understanding and agreement based on two-way acknowledgement between workers within the Confined Space and ground personnel must be established before work begins.

Depending on confined space and atmosphere within, the following PPE should be considered:

- respiratory protective equipment (RPE)
- safety helmet
- gloves

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- hearing protectors
- safety harness
- lifeline

A safety observer is required for work in Confined Spaces. A safety observer assists with monitoring of the atmosphere, checks-in with the worker at regular intervals and initiates any rescue if required.

A rescue plan must be in place and understood by all before work begins. A rescue plan should ensure the safety of both occupants and rescuers. Safe exits, accessible rescue and firefighting equipment, First Aid, and clear emergency procedures are all required.

Mandatory pre-entry checks must be carried out. These include:

- All Energy isolations are complete and tagged.
- Gas detector is functional and calibrated.
- Rescue plan is tested and understood by all parties.
- PPE has been inspected and fitted.
- Communication system has been tested.
- All permits and certificates are valid.

Further information and relevant standards that apply for managing the risk from confined space:

- WorkSafe Confined Space – Good practice guidelines
- Meridian Certificate – Confined Space Entry

Critical Questions to consider

- How has competency for critical roles, such as safety observer, supervisor and rescue team, been demonstrated?
- Have you tested the communication equipment/system?
- Is additional ventilation required?
- Is your gas detector functional for the gases potentially present?
- Can your activity change the atmosphere in the confined space?
- Can an associated activity change the atmosphere or conditions in the confined space?
- How are roles and responsibilities within the work party communicated?
- Is your rescue plan practical, rehearsed, and have all rescue team members been briefed?
- Have you checked your rescue equipment and does the rescue team know how to use it?

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≋ Water

Drowning or hypothermia from working in, on or above water.

Examples of where this Critical Risk might be present:

- Working on structures around water, canals, dam gates or valves.
- Working or travelling on boats.
- Diving operations.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk of water::

Engineering controls

The risk of falling when working over water must be managed. Appropriate edge protection should be installed wherever practical. Where edge protection Is not suitable or practicable, a fall restraint and/or fall arrest system must be used.

Areas around water edges must be maintained to a high standard. Ground conditions and work environments must be free of any trip hazards, and barriers or fencing to prevent falls should be installed wherever appropriate. Ground stability around water edges should be tested.

Boats must be suitable for the task and well-maintained. In addition, the skipper must understand maritime rules and safe boating practices.

Use of Remotely Operated Vehicles (ROVs) should be considered, especially in hazardous or challenging environments. ROVs can carry out underwater inspections and surveys and minimise the risks associated with direct diver entry by allowing for pre-dive assessments and real-time monitoring.

Minimisation controls

Life jackets must be worn at all times when working in, on or near water where there is a risk of drowning. Lifejackets must be used, maintained and serviced as required by the manufacturer. All personnel must be trained in the correct use of the life jackets used.

A safety observer is required for work in, on or above water when there is a risk of drowning. A safety observer can observe the worker and initiate any rescue if required.

A rescue plan must be in place and understood by all before work begins. A rescue plan should outline emergency procedures and include readily available rescue equipment and First Aid. Oxygen resuscitation equipment must be available for dive operations.

Signage must be visible to warn people of hazards from water. Signage should be clear, readable and placed where people are likely to access water or where the risk of drowning is high.

Rescue buoys should be available where practical. Buoys should be placed where people are likely to access water or where the risk of drowning is high.

Monitoring of conditions is crucial. This includes monitoring of weather conditions and of warning systems for unexpected changes to water levels or flows.

All dive operations must be carried out by qualified dive personnel. This includes a qualified supervisor and experienced divers. Evidence of qualification must be provided.

Dive equipment must be certified, tested and suitable for the task. All equipment used for the dive operation MUST be checked by the dive supervisor prior to use.

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An effective communication system must be in place whenever a lone worker is working near water. A shared understanding and agreement based on two-way acknowledgement must be established before work begins.

Appropriate footwear (e.g. ankle high boots, good tread) must be worn when walking near water. In addition, walking sticks, ropes, and other aides are also recommended on steep slopes to prevent slips and falls.

Further information and relevant standards that apply for managing the risk of water:

- NZS 7901:2014 Electricity and Gas Industries – Safety Management Systems for Public Safety
- Maritime NZ Safety Guidelines

Critical Questions to consider

- How could someone fall in?
- Have you planned your activity and provided appropriate notifications?
- Do you understand how plant operations may change water levels or flows?
- If someone fell in, how will he or she be prevented from drowning?
- If you are working alone, what precautions are you taking for working around water?
- Do you have a rescue plan in place and the people and equipment on hand to carry out the required emergency response?
- Could adverse weather affect flow conditions?
- Is the boat appropriate for the task?
- Is the skipper appropriately qualified for the task?

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Psychological harm

A mental health issue leading to significant mental harm, self-harm or harm to others.

Examples of where this Critical Risk might be present:

- In any environment where Meridian staff or contractors are required to work, including in the workplace and remote-working, and within teams and projects.
- This risk may present from harmful factors within the workplace (e.g. poor work design, workload, work hours, isolation, stress or trauma at work, bullying, threats and harassment).
- This risk may also present in the workplace from harmful factors outside the workplace such as prior trauma, life circumstances, substance addiction and abuse, underlying mental wellbeing conditions, coping styles or lower self-confidence.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk from psychological harm:

Engineering controls

Work must be organised in a way that supports mental wellbeing. This includes careful considering of how tasks or jobs are designed, organised, managed and supervised.

Particular focus must be given to tasks or jobs with inherent psychosocial hazards and risks. Leaders of people who carry out tasks and jobs that heightens their exposure to psychosocial hazards (e.g. intimidation, aggression, harassment, high work volume) must take extra steps to proactively support the mental wellbeing of these people.

Good communication and collaboration strategies are required. These strategies help reduce the risk of isolation, especially of lone, remote or working from home employees.

Managers understand and foster Psychological Safety. Having a team environment with trust, collaboration and communication helps build a psychology safe space to share and support one another. Managers in particular play a key role - their behaviours, such as listening respectfully, taking concerns seriously, promoting fairness, and responding with empathy, set the tone for how safe people feel at work.

People are provided with the right resources to thrive in their role. This includes adequately training people to do their jobs and providing the right tools, equipment, systems, policies and processes to reduce the risk of psychological and physical harm.

Minimisation controls

Our Code of Conduct must be adhered to by all staff and contractors. Meridian's Code, and associated policies and procedures, sets clear behavioural expectations that support a safe and respectful environment, with clear accountability and consequences for those that breach the code.

A risk assessment of how people could be exposed to psychosocial harm must be undertaken. Early identification of psychosocial risk allows for prompt intervention, lowering the chance of serious incidents caused by either acute or cumulative stress exposure.

Channels for reporting incidents, concerns, or requests for support are required. Meridian offers confidential channels—including Wellbeing Partner, EAP, People Business Partners, and Managers—for support or concerns, ensuring sensitive handling of all issues.

Support systems are in place to help minimise impacts from harm. Internal wellbeing support services are available immediately when needed. Alongside self-help resources on Electric Ave, CARE

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plans—such as Wellbeing Team assistance, counselling, or time off work—are provided for those needing extra support. Professional counselling aids recovery, and immediate emotional support after specific events helps victims or witnesses manage trauma and stress.

Monitoring and review for ongoing management of this risk. Feedback mechanisms are used to monitor the effectiveness of psychosocial risk management. Pulse surveys, engagement surveys, feedback from CARE plans, and learning team findings are among the sources utilized for tracking and reviewing approaches to managing exposure to factors that could result in psychosocial harm.

Further information and relevant standards that apply for managing the risk from psychological harm:

- Meridian Psychosocial Risk Register
- Meridian Critical Risk Control Standard – Exposure to Causal factors of psychological harm (full version)
- ISO 45003 – Psychological Health and Safety at Work
- Managing psychosocial risks at work | WorkSafe
- Critical Risk Control Standard – Violence, sexual assault or other significant injury

Critical Questions to consider

- Do our people know where to get support from if they need it?
- Do our people understand what channels are available to share or discuss mental health challenges or issues?
- Are the control measures in place to support your wellbeing working effectively?
- Is your workload reasonable and achievable?
- Do you understand the expectations of your role and responsibilities?
- Do you think that the physical work environment allows for good communication and collaboration?
- Do you believe that the environment that you work in is safe.
- If you experienced a situation at work that made you feel uncomfortable, would you feel safe to report it?
- Do you feel there is adequate support for people who are experiencing personal or work-related issues?
- If you are a lone or remote worker, do you feel adequately supported and monitored?
- Does your leader demonstrate commitment to psychological safety and wellbeing?

Violence, sexual assault or other significant injury

Our staff, customers or members of the public experiencing violence, sexual assault or a significant injury in our workplaces or in relation to Meridian's business off-site, including in customer's homes.

Note: this Critical Risk only captures significant injuries not already covered under another Critical Risk.

Examples of where this Critical Risk might be present:

- In any environment where Meridian staff or contractors are required to work.
- Off-site work-related activities (e.g. training courses, social activities, client/customer meetings)
- In customers' homes where Meridian or our contractors provide electricity or other services.
- In areas accessible to the public whereby Meridian has assets.

Critical Controls

Our Critical Controls are our minimum expectations for managing the risk of physical harm to staff, customers and public:

Engineering controls

Meridian workplaces must be secure. Secure workplaces include controlled access, appropriate levels of CCTV, secure access cards with identification and security alarms. Workplaces may also include duress alarms when deemed appropriate.

Emergency plans and readiness must be in place and understood. Effective planning ensures clear steps are in place for incidents involving violence, aggression, or major injury, helping to minimise harm and de-escalate situations. Emergency procedures for events like earthquakes or fires must be clear and understood by everyone.

As much as is reasonably practicable, we separate members of the public from significant risk. This may include barriers, fencing, gates and doors for parts of our assets deemed high-risk.

Minimisation controls

Our Code of Conduct must be adhered to by all staff and contractors. Meridian's Code, and associated policies and procedures, include a zero tolerance of violence or sexual harassment/assault to promote a safe and respectful environment and clear accountability and consequences.

A risk assessment with adequate controls must be undertaken to evaluate risk. Staff and managers should identify potential risks of violence or safety concerns to help create a safer workplace and take early action to reduce harm.

Training may be required for those in high-risk roles. If it is identified that a person is at higher risk of violence or assault, De-escalation Training (to manage and diffuse tense or potentially violent situations) should be undertaken.

Lone workers and travellers must have additional controls to manage risk. Lone workers must use communication protocols or check-ins; vehicle/personnel tracking, dead-man alarms, or a buddy system may be required. Police or security escorts are necessary in high-risk situations.

Medically Dependent customers are well supported. Staff training, and robust and tested processes are required to support our Medically Dependent customers.

Our workplaces must include First Aid and Civil Defence supplies and Defibrillators. Equipment to support immediate response in the case of injury must be readily available at our workplaces.

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Staff or contractors entering customer homes must be fully trained and up-to-date with emergency procedures. Controls may include a communication protocol, buddy system, de-escalation training, and self-defence training. Meridian must ensure ICP records for the property reflect any known risks.

Tailgating into Meridian workplace must be actively stopped. *Everyone has a role to play in assessing and questioning unknown people who attempt to tailgate / follow a Meridian staff member into a secure workplace area.*

Signs and site inductions must communicate risk to visitors and members of the public. To reduce the likelihood of injury in a Meridian workplace or on a Meridian site, risks must be clearly communicated via signs and induction material.

Pre-employment screening must include declaration of convictions. Recruitment processes include a requirement to declare convictions so an informed decision can be made on the person's character and whether they should be hired to work for Meridian.

Confidential channels to report incidents and concerns are required. Meridian offers several confidential channels—including EAP, People Business Partners, and Managers—for reporting concerns or incidents of violence to ensure appropriate acknowledgement and management. Confidential events should not be entered directly into Mesh.

Support systems are in place to help minimise impacts from harm. Internal wellbeing support services activate immediately on notification of an event. Immediate emotional support helps victims or witnesses cope with the trauma and stress. Professional counselling helps victims to process their experiences and begin the healing process.

Learning Teams are leveraged to understand and improve. Learning Teams offer a structured and collaborative setting intended to facilitate understanding of events and the identification of potential systemic issues. They can support the exploration of underlying causes and contribute to processes such as prevention and accountability.

Further information and relevant standards:

- Meridian Code of Conduct and Supplier Code of Conduct
- Meridian Non-Discrimination and Anti-Harassment Policy
- Meridian Whistle blowing Policy
- Critical Risk Control Standard – Psychological Harm

Critical Questions to consider

- Are people aware of the process for reporting concerns or complaints?
- Are you people aware of the risks of tail-gating into secure areas?
- Do people feel safe when working with others in our offices and sites?
- Is there a plan in place with additional controls when someone is working alone?
- Are there any tasks, places or people that make people feel at risk?
- Are you clear on what to do if you experience or witness violence or assault at work?
- Do you feel safe speaking up is something or someone makes you feel uncomfortable or afraid when you are at work?
- Do all our Customer Care staff feel confident with the requirements and processes for managing interactions with Medically Dependent customers?
- Does your physical work environment help keep you safe? What would make you feel safer?
- Are there any controls, guidelines that you think aren't working as well as they could be
- Are people aware of the process for reporting concerns or complaints?
- Do people feel safe when working with others in our offices and sites?

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