

Mirvac Minimum Requirements (MMRs)

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ABOUT

At Mirvac, health, safety, and environment is integral to everything we do, and we take a systematic and proactive approach to embedding this throughout the entire property lifecycle.

The Mirvac Minimum Requirements (MMRs) are a key part of the Mirvac Health, Safety and Environmental Management System, and are important to align critical controls for known major hazards across multiple business units and workplaces that are either controlled by Mirvac, or by our appointed third parties.

The MMRs define Mirvac's major hazard exposures and the critical controls to manage these hazards.

Third parties

The MMRs describe the level of risk control that Mirvac requires third parties to meet or exceed. Third parties including contractors, designers and property managers are to consider and incorporate the critical controls into their respective systems of work.

The MMRs represent minimum standards for known major hazards, however they are not intended to be an exhaustive resource, nor is compliance with these standards alone necessarily sufficient to discharge a third parties work health and safety obligations at law.

Third parties are required to undertake their own ongoing assessments to meet all relevant regulatory and industry safety standards in respect of the works under contract.

How to use this document

This document is fully interactive. If something looks clickable, it usually is.

To navigate to the different major hazards, use the MMR Index. Clicking an icon will take you to the relevant MMR.

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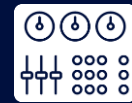
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1. DEMOLITION

Purpose: Eliminate or minimise the risk of a fatality or life changing injury arising from the demolition of a high-risk structure.

Plan the work

When planning to demolish a high-risk structure, you must:

- 1.1.1 Obtain a structural assessment report.
- 1.1.2 Obtain engineering advice to assess the impact on adjacent structures, and ways to manage those risks.
- 1.1.3 Undertake a hazardous materials assessment and arrange licenced and competent people to remove and dispose of any identified materials.
- 1.1.4 Identify all connected services and confirm they are either isolated, disconnected, or protected.
- 1.1.5 Engage a licenced demolition contractor to manage the work.

Demolition management plan

To manage demolition work for high-risk structures, you must:

- 1.2.1 Develop a demolition management plan, approved by a structural engineer with demolition experience. The plan must include the demolition methodology and sequence, and any temporary works requirements.
- 1.2.2 Conduct a demolition methodology review if the structure is greater than 10 metres in height. The review must include the demolition contractor and relevant stakeholders.

Demolition scaffold requirements

If scaffold is required during demolition, you must:

- 1.3.1 Only use scaffold designed for demolition work.

During the demolition

To safely manage the demolition, you must:

- 1.4.1 Establish physical barriers around the site and demolition zones to prevent unauthorised access.
- 1.4.2 Prevent debris from leaving the demolition zone by using effective containment measures.
- 1.4.3 Follow the approved demolition plan and methodology. Any changes to the plan must be approved by a structural engineer with demolition experience.
- 1.4.4 Eliminate the need for ground personnel to be located within the demolition zone during mechanical demolition or ensure all mobile plant movement is stopped before entry.

Mobile plant used on a suspended floor

If mobile plant is used on a suspended floor, you must:

- 1.5.1 Ensure the structure has been assessed by a structural engineer prior to loading the floor.
- 1.5.2 Remove debris progressively to prevent overloading floors.
- 1.5.3 Protect open edges to prevent the mobile plant from falling.

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1. DEMOLITION

Purpose: Eliminate or minimise the risk of a fatality or life changing injury arising from the demolition of a high-risk structure.

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Related MMRs

This document must be read alongside the following MMRs:

- [Mobile plant and traffic.](#)
- [Fall of person or object from height.](#)
- [Cranes and lifting.](#)
- [Overhead and underground services.](#)
- [Asbestos and silica.](#)
- [Temporary works.](#)
- [Electricity.](#)
- [Cultural heritage and environmental impacts.](#)



2. BUILDING STRUCTURES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from the failure of a permanent above ground or below ground structure.

Acquisition of an asset

As part of the asset acquisition, you must:

- 2.1.1 Engage a suitably qualified and experienced structural engineer to conduct a structural assessment to understand any remediation requirements and inform the acquisition decision.

Design requirements

When designing permanent structures, you must:

- 2.2.1 Engage with stakeholders to assess buildability and operational risk reduction through safety in design.
- 2.2.2 Identify, assess, and document the site-specific structural risks, and importance level rating.
- 2.2.3 Design structures to meet functional performance and safety requirements in accordance with relevant design standards.
- 2.2.4 Design structures to limit deflections, sway, and inter-storey drifts under various loads, maintaining specified limits for slabs, beams, and façade interfaces as per design standards.
- 2.2.5 Engage an experienced structural engineer to certify the entire design, or have proprietary systems certified by an accredited laboratory.
- 2.2.6 Obtain a separate peer review of the design if the structure is either four (4) stories or higher or is of a unique design.

Construction requirements

During construction of permanent structural elements, you must:

- 2.3.1 Construct all elements according to the design and agreed methodology.
- 2.3.2 Develop an inspection and test plan that considers the complexity and risk associated with the structural element.
- 2.3.3 Ensure the structure is inspected and verified by a qualified and experienced structural engineer.

Maintenance of completed asset

At an operating asset, you must:

- 2.4.1 Develop and implement a risk-based inspection schedule, prepared by a structural engineer, to confirm structural integrity and identify signs of weathering, corrosion, and damage.

Related MMRs

This document must be read alongside the following MMRs:

- [Building fire.](#)
- [Building attachments and facades.](#)



3. BUILDING ATTACHMENTS & FACADES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury due to the failure of a façade or suspended heavy structure.

Acquisition of an asset

As part of the asset acquisition, you must:

- 3.1.1 Engage a suitably qualified and experienced façade engineer to conduct a review of the façade and suspended heavy structures to understand any remediation requirements and inform the acquisition decision.

Façade design requirements

During the design of a façade, you must:

- 3.2.1 Meet the functional performance requirements, considering both static and dynamic loads.
- 3.2.2 Engage with stakeholders to assess buildability and operational risk reduction methods.
- 3.2.3 Engage an experienced facade engineer to certify the design and then arrange a separate peer review of the design.
- 3.2.4 Ensure moveable elements are designed with fail safe self-locking systems.
- 3.2.5 Assess material interactions and compatibility to prevent unexpected deterioration from environmental conditions.
- 3.2.6 Develop a façade access and maintenance plan with input from asset management teams.
- 3.2.7 Review façade designs if the building configuration changes, or materials are changed during procurement, or if new structures are built in the area that could affect performance.
- 3.2.8 Use materials that comply with the national construction code, are certified by an accredited laboratory, and approved for their purpose.

Design requirements for suspended heavy structures

During the design of a suspended heavy structure, you must:

- 3.3.1 Identify all suspended heavy structures, as part of the safety in design process, and assess the level of risk exposure.
- 3.3.2 Engage an experienced structural engineer to certify the design and then arrange a separate peer review of the design.
- 3.3.3 Specify mechanical fastening as the primary securing method, with chemical fastening only used to support the mechanical method.
- 3.3.4 Ensure the design and install methodology considers the level of risk, environmental exposure, product selection, substrate structural assessment, installer competency, and ongoing maintenance.

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3. BUILDING ATTACHMENTS & FACADES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury due to the failure of a façade or suspended heavy structure.

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Construction and installation requirements

During construction of façade elements, or the installation of suspended heavy structures, you must:

- 3.4.1 Install all items according to the design fastening methodology and manufacturers requirements.
- 3.4.2 Develop an inspection and test plan that considers the complexity and risk associated with the façade installation methodology.
- 3.4.3 Have a qualified and experienced facade engineer inspect and verify the facade installation.
- 3.4.4 Have a qualified and experienced structural engineer inspect and verify the installation of a suspended heavy structure.

Asset maintenance and inspection

When the asset is under management, you must:

- 3.5.1 Develop and implement a risk-based inspection and maintenance schedule, prepared by an independent façade engineer.

Related MMRs

This document must be read alongside the following MMRs:

- [Building fire.](#)
- [Building structures.](#)



4. TEMPORARY WORKS

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from the failure of temporary works.

Design requirement - general

When designing the temporary works, you must:

- 4.1.1 Assess the complexity and risk of the temporary works and develop a plan that covers the requirements for design, installation, inspection, verification, and relevant third-party checks.
- 4.1.2 Select a fit-for-purpose temporary work system that complies with the relevant codes and standards.
- 4.1.3 Obtain documented geotechnical and/or structural advice to confirm the ground or surface is suitable to support the expected static and dynamic loads.

Design requirement - high-risk temporary work

If high-risk temporary work is required, the following additional controls must be applied:

- 4.2.1 Use an experienced, qualified structural engineer to design the temporary works and then arrange a separate peer review of the design.

Planning requirements

When planning temporary works, you must:

- 4.3.1 Nominate a competent person to coordinate, oversee, and manage the temporary works.
- 4.3.2 Assess the location of the temporary works in relation to adjacent activities to prevent accidental conduct.

Installing temporary works

To ensure the temporary works are installed correctly, you must:

- 4.4.1 Install all temporary works according to the design and manufacturer's requirements.
- 4.4.2 Provide all persons involved in the erection and dismantling of temporary works with all necessary information, such as drawings, loads, and intended use.
- 4.4.3 Confirm the workers involved in temporary works are trained, competent, and certified or licenced, if required.
- 4.4.4 Develop and implement an appropriate inspection and test plan to confirm the structure has been installed according to the design prior to loading.
- 4.4.5 Have high-risk temporary works verified by an experienced qualified structural engineer after installation, or after any design change.
- 4.4.6 Ensure all temporary works are only loaded within their designed capacity.
- 4.4.7 Set-up physical protection around the base of temporary work to prevent mobile plant contact.
- 4.4.8 Secure temporary work components against risks of adverse weather.

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4. TEMPORARY WORKS

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from the failure of temporary works.

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Erect and dismantle scaffold

When erecting, or dismantling a scaffold, you must:

- 4.5.1 Ensure all workers inspecting, erecting, altering, dismantling or supervising scaffold work, hold a valid high-risk work licence, relevant to the specific type of scaffold.
- 4.5.2 Ensure the scaffold is erected and dismantled according to the design and manufacturer's requirements.
- 4.5.3 Have planks secured to prevent uplift, where wind may be a risk.
- 4.5.4 Prevent unauthorised access to incomplete or unattended scaffolds.

Scaffolding stability during use

To maintain the stability of scaffolding during use:

- 4.6.1 Ensure all workers inspecting, erecting, altering, dismantling or supervising scaffold work, hold a valid high-risk work licence, relevant to the specific type of scaffold.
- 4.6.2 Prevent unauthorised interference with scaffold ties.
- 4.6.3 Conduct documented inspections before initial use, after any incident, after an extreme weather event, after repair or change, and at least every 30 days.
- 4.6.4 Lock the wheels on mobile scaffolds.

Related MMRs

This document must be read alongside the following MMRs:

- [Excavation, trenching and stockpiles.](#)
- [Demolition.](#)
- [Cranes and lifting.](#)
- [Unauthorised access to assets or sites.](#)
- [Building maintenance units, swing stages, hoists and lift.](#)



5. EXCAVATION, TRENCHING & STOCKPILES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from ground collapse of excavations or trenches deeper than 1.5 metres and large stockpiles.

Design and plan work

When designing and planning excavation and trenching works, you must:

- 5.1.1 Identify adjacent buildings or structures that may be impacted by ground disturbance and obtain engineering advice on the required structural bracing controls.
- 5.1.2 Assess the ground conditions and the work area to identify the most appropriate ground support method.
- 5.1.3 Eliminate or minimise the need for people to enter a deep excavation or trench and backfill as soon as practical.
- 5.1.4 Obtain independent engineering advice to confirm the design of any permanent ground support system.

Prevent ground collapse

To prevent the ground collapse at a temporary excavation or trench, you must:

- 5.2.1 Ensure positive ground support systems, where used, are designed and certified by an engineer based on geotechnical advice.
- 5.2.2 Ensure positive ground support systems are installed and inspected by competent persons in accordance with manufacturers requirements or engineering advice.
- 5.2.3 Ensure battering or benching, where used, is designed by a competent person and obtain geotechnical approval if the bench or batter may exceed an angle of repose of 45 degrees.
- 5.2.4 Keep earthmoving equipment and excavated material outside the zone of influence unless ground support systems are designed for the load.
- 5.2.5 Perform regular inspections informed by geotechnical advice to detect water ingress and changes in ground conditions.

Fall prevention requirements

To prevent or minimise the risk of a fall when working near, or accessing an excavation or trench, you must:

- 5.3.1 Establish effective fall prevention controls that are fit-for-purpose and address the level of risk.
- 5.3.2 Provide safe means of access and egress based on the site conditions.

Manage stockpiles

When stockpiles are created, you must:

- 5.4.1 Form stockpile batters or cut angles in accordance with geotechnical advice.
- 5.4.2 Restrict pedestrian access to stockpile exclusion zones using physical barriers in accordance with geotechnical advice.

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5. EXCAVATION, TRENCHING & STOCKPILES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from ground collapse of excavations or trenches deeper than 1.5 metres and large stockpiles.

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Related MMRs

This document must be read alongside the following MMRs:

- [Mobile plant and traffic.](#)
- [Overhead and underground services.](#)
- [Cultural and environmental impacts.](#)
- [Confined space entry.](#)



6. CRANES & LIFTING

Purpose: Eliminate or minimise the risk of fatality or life changing injury due to the failure of a crane (tower or mobile) and the loss of a load during lifting operations.

Crane management plan requirements

Where a tower crane exists or multiple mobile cranes are operating in close proximity with a risk of collision, you must:

- 6.1.1 Develop a crane management plan. The plan must include crane details (locations, number and type of cranes), operating areas, public protection controls, exclusion zones, lift plan activities, communication and coordination arrangements.

Plan the lift

When planning a lift or sequence of lifts, you must:

- 6.2.1 Assess the load characteristics and confirm the weight of the load prior to lifting.
- 6.2.2 Choose static crane lifts over pick and carry lifting operations where practical.
- 6.2.3 Only operate mobile cranes up to 90% of their rated safe working load limits.
- 6.2.4 Only operate tower cranes up to 100% of their rated safe working load limits.
- 6.2.5 Ensure the ground or surface can withstand pressures applied by the crane and loads.
- 6.2.6 Ensure the crane operator holds a valid high-risk work licence for the type of crane, and where a licence is not required, the operator's competency must be verified.
- 6.2.7 Establish controls to prevent unauthorised people from entering the crane operating area.
- 6.2.8 Protect outriggers against contact from mobile plant or vehicles by installing physical barriers or diverting movements.

Rigging and lifting gear

To ensure loads are secure before lifting, you must:

- 6.3.1 Ensure rigging methods are determined by qualified, or licenced personnel appropriate to the lift type and have the loads secured according to those methods.
- 6.3.2 Use only certified, fit-for-purpose lifting gear and inspect before use.

During a lift

When conducting a crane lift, you must:

- 6.4.1 Prevent loads from passing over people.
- 6.4.2 Make sure the operator or rigger/dogger can always maintain sight of the load.
- 6.4.3 Maintain effective communication between the crane crew during lifting operations.

Complex designed lift requirements

For all complex lifts, you must:

- 6.5.1 Have a qualified person develop and document a lift plan.
- 6.5.2 Verify the accuracy of load indicators by performing a test lift prior to commencing the scheduled lift.
- 6.5.3 Obtain geotechnical assessment of the ground bearing capacity prior to the lift.

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6. CRANES & LIFTING

Purpose: Eliminate or minimise the risk of fatality or life changing injury due to the failure of a crane (tower or mobile) and the loss of a load during lifting operations.

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Ground preparation for mobile and vehicle loading cranes

To ensure safe ground conditions for mobile and vehicle loading cranes, you must:

- 6.6.1 Assess ground conditions for the placement of the crane before commencing lifting operations and following significant rain events.
- 6.6.2 Set up mobile, or vehicle loading cranes on stable, level ground with appropriate supports and outriggers fully extended unless the manufacturer's instructions allow for partial extension and a risk assessment confirms it is safe to do so.

Crane design, assembly and maintenance - General

The general requirements for crane design and maintenance are as follows:

- 6.7.1 Ensure cranes are registered according to the regulatory requirements.
- 6.7.2 Ensure cranes are fitted with fully functional limiters, warning lights and alarms.
- 6.7.3 Conduct routine maintenance and periodic and major inspections by qualified persons in accordance with regulatory and manufacturer requirements.

Design, assembly and maintenance – tower crane specific

The requirements for tower crane design, assembly and maintenance are as follows:

- 6.8.1 Ensure tower cranes are fitted with a fire warning system, fire suppression, a zoning system, anti-collision systems, warning lights and alarms, real time data monitoring, security cameras/sensors, fall protection systems and anti-climbing controls.
- 6.8.2 Ensure that the assembly, installation, climbing, and/or dismantling of a tower crane is designed and approved by a structural engineer experienced with tower cranes.
- 6.8.3 Obtain confirmation from a structural engineer that the loading of a suspended slab or other supporting structure is suitable for the crane and expected loads.
- 6.8.4 Conduct 3-monthly inspections on the structure, mechanicals, hoist ropes, cabin systems and attachments to confirm they remain in safe condition and in accordance with manufacturers specifications.
- 6.8.5 Ensure tower cranes, and all related components (e.g. ties, tower sections, yokes, and lifting attachments) do not exceed 20 years of age since the date of manufacture.

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6. CRANES & LIFTING

Purpose: Eliminate or minimise the risk of fatality or life changing injury due to the failure of a crane (tower or mobile) and the loss of a load during lifting operations.

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Earthmoving and equipment lifting suspended loads

If earthmoving equipment is used to lift suspended loads, you must:

- 6.9.1 Ensure the earthmoving equipment is designed and certified for that purpose.
- 6.9.2 Ensure the equipment is fitted with a fully enclosed lifting point marked with the safe working load or working load limit.
- 6.9.3 Display a rated capacity load chart in the cabin.
- 6.9.4 Install controlled descent or burst protection valves on critical lifting cylinders for equipment with a lift capacity over 1 tonne.
- 6.9.5 Verify that ground conditions along the path of travel are suitable and stable for pick and carry operations.
- 6.9.6 Assess and comply with the dynamic rated capacity of the equipment during pick and carry operations.
- 6.9.7 Ensure buckets are detached and quick hitches are included in load charts or lift calculations.
- 6.9.8 Confirm that operators hold the relevant licence to lift suspended loads, or where a licence is not required, be verified as competent.

Related MMRs

This document must be read alongside the following MMRs:

- [Mobile plant and traffic.](#)
- [Fall or person or object from height.](#)
- [Demolition.](#)
- [Temporary works.](#)
- [Overhead and underground services.](#)
- [Unauthorised access to assets or sites.](#)



7. BUILDING MAINTENANCE UNITS, HOISTS, SWING STAGES & LIFTS

Purpose: Eliminate or minimise the risk of fatality or life changing injury from failure of building maintenance units, swing stages, personnel/material hoists, or internal lifts.

Acquisition of an asset

As part of the asset acquisition, you must:

- 7.1.1 Conduct inspections of existing building maintenance units and internal lifts using a suitably qualified engineer to understand any remediation requirements and inform the acquisition decision.

Installation and certification of lifts and hoists

When installing an internal lift, or personnel/materials hoist, you must:

- 7.2.1 Obtain design certification from qualified engineers to confirm the lift or hoist is designed to Australian Standards.
- 7.2.2 Obtain approval from the regulator before installation or alteration.
- 7.2.3 Ensure load limits are clearly displayed on the lift or hoist.
- 7.2.4 Incorporate guards into the design to prevent or minimise entanglement risk.
- 7.2.5 Install lifts or hoists in accordance with the regulator-approved design.
- 7.2.6 Engage qualified personnel to install and commission the equipment.

Operation and use of hoists

To ensure safe use of personnel/materials hoists, you must:

- 7.3.1 Ensure all operators hold a valid high-risk licence.
- 7.3.2 Verify total load and/or number of people is within the rated capacity.

Design façade access equipment

When designing façade access equipment, you must:

- 7.4.1 Engage a qualified engineer with relevant experience to design platforms and supporting structures, considering the façade design and any access requirements.
- 7.4.2 Obtain confirmation from a structural engineer that the building or structure can support the intended load of the unit and work activity.
- 7.4.3 Ensure the working load limit is clearly displayed on the platform.

Install façade access equipment

To correctly install façade access equipment, you must:

- 7.5.1 Ensure swing stages are installed by a person holding the relevant high-risk work license.
- 7.5.2 Engage qualified personnel to install and commission the equipment.
- 7.5.3 Have a competent person verify that the installation is in accordance with the design and manufacturer's requirements before use.

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7. BUILDING MAINTENANCE UNITS, HOISTS, SWING STAGES & LIFTS

Purpose: Eliminate or minimise the risk of fatality or life changing injury from failure of building maintenance units, swing stages, personnel/material hoists, or internal lifts.

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Operation and use of façade access equipment

To ensure safe use of façade access equipment, you must:

- 7.6.1 Tether or contain tools and materials using netting or similar methods wherever there is a risk of dropped objects.
- 7.6.2 Set up exclusion zones wherever there is a risk of falling objects.
- 7.6.3 Develop rescue and retrieval procedures before starting work.
- 7.6.4 Only permit trained and authorised people to operate the equipment.
- 7.6.5 Inspect all components for damage, wear, and cracks before use.
- 7.6.6 Distribute materials evenly in the platform and verify total load is within the rated capacity before operation.
- 7.6.7 Wear a harness attached to a certified anchor point.
- 7.6.8 Monitor weather conditions and stop work if strong winds or adverse weather exceeds the manufacturer's recommendations.
- 7.6.9 Secure the equipment after use to prevent unauthorised access and use.

Equipment inspection and maintenance requirements

To ensure the ongoing safety of the equipment, you must:

- 7.7.1 Schedule and conduct regular inspections and maintenance according to Australian Standards, and manufacturer requirements.
- 7.7.2 Test all safety features according to the relevant Australian Standards and manufacturer requirements.
- 7.7.3 Engage qualified personnel to maintain and inspect the equipment

Related MMRs

This document must be read alongside the following MMRs:

- [Fall of person or object from height.](#)
- [Temporary works.](#)



8. MOBILE PLANT & TRAFFIC

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from interactions between pedestrians, mobile plant and vehicles.

Design and plan work

To separate people, mobile plant and vehicles, you must:

- 8.1.1 Design and construct carparks for commercial and public assets in accordance with the relevant Australian Standards and local authority guidelines.
- 8.1.2 Develop and communicate a vehicle and pedestrian movement plan to identify traffic direction and flow, pedestrian crossing points, site entry points, speed limits, parking locations, un/loading areas, and pedestrian exclusion zones.
- 8.1.3 Plan work activities and/or schedule work activities to eliminate or minimise interactions.
- 8.1.4 Establish effective exclusion zones around loading and unloading activities to restrict unauthorised persons from the area.
- 8.1.5 Ensure that proprietary barrier systems, where used, are installed in accordance with the manufacturer's requirements.

Manage mobile plant operations

To prevent ground personnel being struck by mobile plant, you must:

- 8.2.1 Establish and clearly delineate pedestrian and light vehicle "no go" zones around mobile plant operations.
- 8.2.2 Use hard barriers in areas with regular pedestrian movement and where mobile plant interactions cannot be eliminated.
- 8.2.3 Have communication protocols in place between operators and people in control of ground operations.
- 8.2.4 Establish a process for manual mobile plant shutdown and/or install collision avoidance systems that automatically make the plant safe before people enter the mobile plant work area.

Requirements for Operators

Operators of mobile plant must:

- 8.3.1 Verify mobile plant is safe to use and safety devices are working correctly before use.
- 8.3.2 Hold the relevant licence, or where a licence is not required, be verified as competent.

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8. MOBILE PLANT & TRAFFIC

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from interactions between pedestrians, mobile plant and vehicles.

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Minimum mobile plant and vehicle requirements

To ensure mobile plant and vehicles are safe for use, you must:

- 8.4.1 Conduct scheduled maintenance in accordance with the manufacturer's requirements.
- 8.4.2 Have mobile plant fitted with visual and audible warning systems.
- 8.4.3 Ensure modifications to mobile plant and vehicles are engineered and certified by a competent person.
- 8.4.4 Ensure mobile plant is fitted with safety devices that protect the operator from the risks associated with the work activity.
- 8.4.5 Maintain a mobile plant acceptance process that verifies mobile plant operating on site complies with minimum safety requirements.

Work near public roads

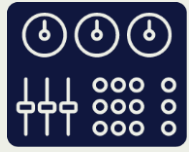
If working on, or near public roads, you must:

- 8.5.1 Have a current traffic management plan and/or traffic guidance scheme/s in place according to local road rules.
- 8.5.2 Ensure all personnel involved in traffic management are licenced for their role.
- 8.5.3 Ensure work is conducted within the designated traffic-controlled area and plant and equipment does not impede nearby traffic.
- 8.5.4 Conduct daily inspections to check traffic control devices are set-up according to the traffic management plan and/or traffic guidance scheme/s.

Related MMRs

This document must be read alongside the following MMRs:

- [Excavation, trenching and stockpiles.](#)
- [Demolition.](#)
- [Cranes and lifting.](#)



9. FIXED PLANT

Purpose: Eliminate or minimise the risk of fatality or life changing injury from the failure or interaction with fixed plant during operation or maintenance.

Design requirements

During the design of systems that include fixed plant, you must:

- 9.1.1 Provide safe access features such as walkways, guardrails, gates and ladders in accordance with relevant Australian Standards.
- 9.1.2 Include warning systems and/or alarms to identify the risk of plant and equipment failure.
- 9.1.3 Ensure pipes under pressure are fit-for-purpose and include appropriate pressure-rated fittings.
- 9.1.4 Include physical barriers, guards, and fencing to prevent access to moving parts.
- 9.1.5 Include emergency stop devices, automatic shutdown features, automatic isolation systems in accordance with the relevant Australian Standard and manufacturer requirements.

Installation and commissioning requirements

During installation and commissioning of a fixed plant, you must:

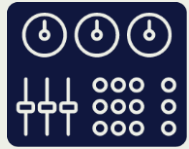
- 9.2.1 Conduct plant risk assessments for the ongoing operation and maintenance.
- 9.2.2 Install and test fixed plant before use in accordance with Australian Standards and manufacturers requirements.
- 9.2.3 Control energy sources using isolation and permit-to work systems.
- 9.2.4 Ensure installation and commissioning of fixed plant is performed by a competent person, who is qualified, where required.
- 9.2.5 Document as-built diagrams, install relevant hazard labels, and retain compliance records.

Operate fixed plant

During the operation of fixed plant, you must:

- 9.3.1 Only allow authorised persons to access and/or use fixed plant.
- 9.3.2 Develop safe operating procedures and train relevant personnel in its safe use.

Continued on the next page....



9. FIXED PLANT

Purpose: Eliminate or minimise the risk of fatality or life changing injury from the failure or interaction with fixed plant during operation or maintenance.

Continued from previous page....

Maintain fixed plant

To effectively maintain fixed plant, you must:

- 9.4.1 Undertake lifecycle planning to identify end-of-life and replacement strategies for the equipment.
- 9.4.2 Implement lockout/tagout procedures to ensure energy is isolated during maintenance.
- 9.4.3 Ensure maintenance of fixed plant is performed by competent person who is qualified, where required.
- 9.4.4 Establish inspection and maintenance schedules according to regulatory, manufacturer requirements, and Australian Standards.
- 9.4.5 Conduct water quality testing on air cooling systems according to regulatory requirements and Australian Standards.

Related MMRs

This document must be read alongside the following MMRS:

- [Fall of person or object from height.](#)
- [Electricity.](#)



10. BUILDING FIRE

Purpose: Eliminate or minimise the risk of fatality or life changing injury from a building fire.

Design of battery energy storage systems and electric vehicle charging stations

When designing battery energy storage systems, or electric vehicle and light electric vehicle charging stations at assets, you must:

- 10.1.1 Engage electrical engineers to design the systems.
- 10.1.2 Engage a fire engineer to design the fire protection measures for battery energy storage systems and fast charging electric vehicle stations.
- 10.1.3 Incorporate the requirements from local fire and building authorities into the design.
- 10.1.4 Mark the locations of electric vehicle and light electric vehicle charging stations, switchboards, and emergency shutdown controls on project fire block plans.
- 10.1.5 Have ventilation systems on battery energy storage systems designed according to Australian Standards and any fire engineering requirements.
- 10.1.6 Ensure electric vehicle charging stations display the regulatory compliance mark symbol.
- 10.1.7 Provide remote emergency shutdown of the electrical supply for the electric vehicle charging stations.

Installation of vehicle charging stations

When planning the install of electric vehicle and light electric vehicle charging stations at assets, you must:

- 10.2.1 Install vehicle impact protection, such as bollards or wheel stops at electric vehicles charging stations.
- 10.2.2 Provide a dedicated 120/120/120 fire resistance level rated room for charging light electric vehicles.

Vehicle charging station access and usage controls

To maintain safe access and control usage of vehicle charging stations, you must:

- 10.3.1 Provide clear, unobstructed emergency access and egress around electric vehicle and light electric vehicle charging stations.
- 10.3.2 Prohibit placing electric vehicle car spaces at the back position of a tandem car space.
- 10.3.3 Restrict general power outlet use in basements to prevent long period or unauthorised charging of electric vehicles and light electric vehicles.

Lithium batteries usage requirements

To manage customers' and tenants' use of lithium batteries, or systems:

- 10.4.1 Document and communicate safe use, handling, and waste disposal procedures for lithium batteries and safe charging procedures.

Continued on the next page....



10. BUILDING FIRE

Purpose: Eliminate or minimise the risk of fatality or life changing injury from a building fire.

Continued from previous page....

Select building materials

As part of design and construction, when selecting building materials:

- 10.5.1 Use only façade, cladding, or insulation materials that comply with the national construction code, are certified by an accredited laboratory, and approved for their purpose.

Asset fire protection system requirements

The requirements for fire protection systems include:

- 10.6.1 Engage a fire engineer to identify the fire protection system requirements for the asset, including signage and lighting that meet Australian Standards and building codes.
- 10.6.2 Design fire suppression and detection systems in accordance with relevant Australian Standards, building codes, and the fire engineer's advice.
- 10.6.3 Design and maintain ventilation systems to prevent the spread of smoke or fire.
- 10.6.4 Inspect and maintain all electrical and mechanical fire safety systems by a competent person in accordance with Australian Standards.
- 10.6.5 Conduct a risk assessment, obtain authorisation, and communicate to all stakeholders before isolating a fire suppression or detection system.

Asset response to fire

At an operating asset:

- 10.7.1 Develop, implement, communicate, and test emergency response procedures.
- 10.7.2 Ensure tenants of premises receive information about the emergency procedures.
- 10.7.3 Review and update emergency response procedures where construction works may elevate the level of risk.

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10. BUILDING FIRE

Purpose: Eliminate or minimise the risk of fatality or life changing injury from a building fire.

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Hot work requirements

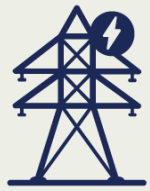
During construction activities, if conducting hot work such as welding, grinding and cutting, you must:

- 10.8.1 Test for flammable gases, vapours, liquids, or contaminated materials, when working in enclosed spaces and de-gas the area before commencing hot work if flammable gases are detected.
- 10.8.2 Only conduct hot work if authorised under a permit-to-work system.
- 10.8.3 Remove, wet down, or cover combustible materials nearby, based on a risk assessment.
- 10.8.4 Have appropriate firefighting equipment readily accessible.
- 10.8.5 Assign a competent standby person (i.e. firewatcher) where required.

Related MMRs

This document must be read alongside the following MMRs:

- [Electricity.](#)
- [Building attachment and facades.](#)
- [Building structure.](#)
- [Fixed plant.](#)



11. OVERHEAD & UNDERGROUND SERVICES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from contact with overhead or underground high-risk services.

Design and plan work

When designing and planning an asset or work zone, you must:

- 11.1.1 Eliminate or minimise the need to work near high-risk services through safety in design.
- 11.1.2 Eliminate or minimise the need to work near high-risk services through the planning of work activities and the selection of plant and equipment.
- 11.1.3 Review asset owner service location data, Before You Dig Australia (BYDA) records and as-built information.
- 11.1.4 Conduct a site assessment to visually identify high-risk service locations and confirm safe approach distances.
- 11.1.5 Obtain the relevant asset owner permits /authorisations and follow any requirements.
- 11.1.6 Communicate the known high-risk services and requirements to people involved in the work.

Locate underground services

To confirm the location of underground high-risk services, you must:

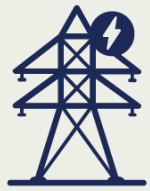
- 11.2.1 Positively identify the location and depth when conducting earthworks within 5 metres of a high-risk service, using non-destructive methods (where ground conditions and site constraints allow).
- 11.2.2 Use calibrated service location equipment appropriate for the service type and ground conditions.
- 11.2.3 Ensure service location equipment is operated by a competent person.
- 11.2.4 Clearly mark the location of known underground services on the ground surface prior to commencing work.

Work near underground services

If working near underground high-risk services cannot be eliminated, you must:

- 11.3.1 Isolate the services, wherever possible, in accordance with asset owner procedures and confirm de-energisation before commencing work.
- 11.3.2 Protect exposed high-risk services with physical protection when mechanical damage could occur.
- 11.3.3 Apply a work authorisation process where mobile plant is required to penetrate the ground within 1 metre of a known high-risk service.
- 11.3.4 Ensure earthing systems for mobile plant are established, where electrical hazards exist.
- 11.3.5 Develop emergency response procedures for potential service strikes.

Continued on the next page....



11. OVERHEAD & UNDERGROUND SERVICES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from contact with overhead or underground high-risk services.

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Work near overhead services

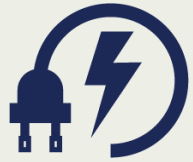
If working near an overhead high-risk services cannot be eliminated, you must:

- 11.4.1 Identify the design envelope of mobile plant and always maintain the safe approach distances, unless you have asset owner authorisation.
- 11.4.2 Have trained and authorised spotters in place when authorised to work inside the asset owners approach distance.
- 11.4.3 Use visible warnings, markers and/or signage to clearly identify the location of the service.

Related MMRs

This document must be read alongside the following MMRs:

- [Excavation, trenching and stockpiles.](#)
- [Mobile plant and traffic.](#)
- [Demolition.](#)
- [Cranes and lifting.](#)
- [Electricity.](#)



12. ELECTRICITY

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from contact with Low Voltage (LV) or High Voltage (HV) electricity.

Electrical installation requirements

The requirements for electrical installations include:

- 12.1.1 Design, install, test, and maintain permanent and temporary electrical installations in accordance with Australian Standards.
- 12.1.2 Maintain accurate electrical diagrams, hazard labels, and compliance records.
- 12.1.3 Install and test residual current devices on circuits, temporary boards, and general-purpose outlets according to Australian Standards.
- 12.1.4 Secure all switchboards, switch rooms and temporary panels, clearly mark them and allow access only to authorised personnel.

Electrical work requirements

Electrical work must be conducted as follows:

- 12.2.1 Prohibit all live electrical work.
- 12.2.2 Ensure electrical work, including testing and commissioning is completed by licenced electricians.
- 12.2.3 Isolate, lock, and tag electrical energy sources, and confirm effective isolation before starting work.

Work in ceiling spaces or sub-floors

If required to enter a completed ceiling space or sub-floor with potential live electrical cables, you must:

- 12.3.1 Identify and isolate live electrical circuits before entering the space.
- 12.3.2 Inspect the space prior to entry, throughout the task and stop work to re-assess if unexpected conditions are identified.

Concealed services

If required to drill or penetrate cavities with potential live electrical cables inside, you must:

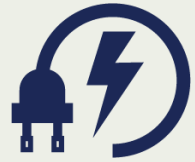
- 12.4.1 Confirm the location of the service and review the work methodology to eliminate the risk of contact. Where elimination is not possible, electrical circuits must be isolated.

Portable electrical equipment requirements

Portable electrical equipment requirements include:

- 12.5.1 Use insulated battery-operated tools instead of plug-in, wherever possible.
- 12.5.2 Test and tag all portable electrical equipment in accordance with Australian Standards.
- 12.5.3 Ensure electrical equipment, including testing equipment is calibrated according to manufacturer's requirements.
- 12.5.4 Remove defective portable electrical equipment from use immediately.
- 12.5.5 Protect electrical leads and cables from damage.
- 12.5.6 Earth generators and welders correctly as per the Original Equipment Manufacturer (OEM) manual.

Continued on the next page....



12. ELECTRICITY

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from contact with Low Voltage (LV) or High Voltage (HV) electricity.

Continued from previous page....

Related MMRs

This document must be read alongside the following MMRs:

- [Overhead and underground services.](#)
- [Building fire.](#)
- [Fixed plant.](#)



13. FALL OF PERSON OR OBJECT FROM HEIGHT

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from people or objects falling from heights.

Design and plan work

During design, or when planning work, you must:

- 13.1.1 Apply the working at height hierarchy of controls.
- 13.1.2 Maintain the effective height of edge protection and remove nearby climbable fixed structures.
- 13.1.3 Design temporary and permanent edge protection, including balustrades to consider normal load and crowd load situations.
- 13.1.4 Eliminate or minimise the risk of objects accidentally falling from a completed structure or balcony.
- 13.1.5 Ensure fixed access ladders and fall prevention systems are designed according to Australian Standards.
- 13.1.6 Ensure perimeter screen systems are designed to suit the characteristics of the building.

Protect edges, penetrations, shafts and risers

To prevent a person or object falling from an exposed edge, penetration, shaft, or riser, you must:

- 13.2.1 Install physical barriers around the perimeter of structures, edges, and work platforms.
- 13.2.2 Tether or contain tools and materials using netting or similar methods wherever there is a risk of dropped objects.
- 13.2.3 Set-up exclusion zones or install engineered overhead protection wherever there is a risk of objects falling to ground or floor level below.
- 13.2.4 Protect large penetrations, shafts, and risers with physical barriers.
- 13.2.5 Protect penetrations with covers that are robust, securely fastened and clearly signed.

At operating assets

To prevent the fall of a person at an operating asset, you must:

- 13.3.1 Engage a competent person to install, test, and certify permanent personal fall protection systems.
- 13.3.2 Install, maintain, inspect and repair permanent personal fall protection systems in accordance with Australian Standards.
- 13.3.3 Limit access to roof top locations to authorised persons.

Continued on the next page....



13. FALL OF PERSON OR OBJECT FROM HEIGHT

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from people or objects falling from heights.

Continued from previous page....

Fall arrest, fall restraint or rope access system requirements

When using fall arrest, fall restraint or rope access systems, you must:

- 13.4.1 Only use fall arrest as a primary means of control if all other fall prevention measures cannot be used.
- 13.4.2 Confirm personal fall protection equipment has been tested and tagged and inspected before use.
- 13.4.3 Ensure all workers are trained in the selection, use, and inspection of equipment.
- 13.4.4 Only connect to certified anchor points or structures assessed by a trained and competent person.
- 13.4.5 Wear a harness attached to a certified anchor point when operating a boom-type mobile elevated work platform.

Use of ladders

The requirements for ladders are as follows:

- 13.5.1 Only use ladders as a work platform as a last resort and only when all other forms of height access equipment are not practical.
- 13.5.2 Use ladders only for short-duration, light tasks and ensure ladders are fit-for-purpose, set up correctly, and used safely.

Related MMRs

This document must be read alongside the following MMRs:

- [Excavation, trenching and stockpiles.](#)
- [Demolition.](#)
- [Temporary works.](#)
- [Cranes and lifting.](#)
- [Mobile plant and traffic.](#)
- [Building maintenance units, swing stages, hoists and lifts.](#)
- [Fixed plant.](#)



14. UNAUTHORISED ACCESS TO ASSETS OR SITES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from an unauthorized person accessing an asset, site or area.

Security risk assessment requirements

To identify the security needs of an asset, you must:

- 14.1.1 Conduct a security risk assessment at acquisition and review at key stages through development, construction and operation.

Secure construction or development sites

To control access to a construction or development site, you must:

- 14.2.1 Install temporary fencing or hoardings that are fit-for-purpose and address the level of risk.
- 14.2.2 Ensure temporary fencing or hoardings are designed to withstand expected dynamic loads.
- 14.2.3 Ensure that any temporary fencing or hoardings are installed according to the relevant standard.
- 14.2.4 Ensure entry points are clearly signed to restrict access, and where there is an elevated risk of unauthorised entry, entry points must be controlled.
- 14.2.5 Inspect temporary fencing or hoardings to confirm they remain effective to control unauthorised access.
- 14.2.6 Identify, assess and control nearby climbable features that enable easy access to site.

Mobile plant or tower cranes on-site

For sites with mobile plant or tower cranes, you must:

- 14.3.1 Install anti-climbing controls on tower cranes and lock crane hatches when not in use.
- 14.3.2 Secure mobile plant outside of work hours.

At operating assets

To control access at operating assets, you must:

- 14.4.1 Implement controls to restrict access to tenancies and areas reserved for tenant access only.
- 14.4.2 Ensure that processes are in place to lock and verify designated entry points are secured at the close of business.
- 14.4.3 Ensure that only authorised persons can enter the premises outside of normal operating hours.
- 14.4.4 Ensure that, except for designated entry points, all other potential entry points are signed and controlled to prevent unauthorised access.
- 14.4.5 Identify and secure entry points to high-risk areas of the operating asset, such as plant rooms, rooftops, and attractive features for misadventure.
- 14.4.6 Engage security services to monitor and respond to security breaches.

Continued on the next page....



14. UNAUTHORISED ACCESS TO ASSETS OR SITES

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from an unauthorized person accessing an asset, site or area.

Continued from previous page....

Unauthorised entry response

To prepare for the potential of unauthorised access, you must:

14.5.1 Assess the risk and prepare response procedures that consider triggers for contacting security and / or emergency services.

Related MMRs

This document must be read alongside the following MMRs:

- [Cranes and lifting.](#)
- [Violence and aggression.](#)
- [Temporary works.](#)



15. SEVERE WEATHER & NATURAL EVENTS

Purpose: Eliminate or minimise the risk of fatality or life changing injury from the impacts of severe weather and natural events.

Design requirements

During the design of an asset, or development, you must:

- 15.1.1 Design structures and infrastructure to withstand foreseeable local severe weather and natural events.
- 15.1.2 Undertake a dam failure impact assessment for all permanent water detention structures.
- 15.1.3 Locate critical infrastructure outside known flood levels.
- 15.1.4 Ensure the design of common area furniture and features considers potential severe weather and natural events.

Plan and respond to emergencies

To respond effectively to emergencies, you must:

- 15.2.1 Include severe weather and natural events as part of emergency management arrangements and planning.
- 15.2.2 Monitor official weather warnings and suspend or modify outdoor work activities when severe weather alerts are issued.
- 15.2.3 Secure all materials that may become airborne during storms or high winds before the event occurs.
- 15.2.4 Conduct a post emergency assessment (when safe to do so) and address any resulting safety risks.

Related MMRs

This document must be read alongside the following MMRs:

- [Cranes and lifting.](#)
- [Temporary works.](#)
- [Building attachment and facades.](#)
- [Building structures.](#)
- [Building maintenance units, swing stages, hoists and lifts.](#)



16. VIOLENCE & AGGRESSION

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from violence and aggression from external parties such as customers, tenants or members of the public.

Security risk assessment requirement

To identify the security needs of an asset, you must:

- 16.1.1 Conduct a security risk assessment at acquisition and review at key stages through development, construction and operation.

Design requirements

When designing an asset, you must:

- 16.2.1 Design public open spaces, landscaping, lighting, and building layout by applying Crime Prevention through Environmental Design (CPTED) principles.
- 16.2.2 Design security surveillance technology and alarms based on the security risk assessment.

Respond to violence and aggression events

To respond effectively to aggressive, or violent events, you must:

- 16.3.1 Eliminate or minimise people working alone, and where this is not possible, ensure workers have access to effective security response and/or safe retreat areas.
- 16.3.2 Train customer facing roles in dealing with violence, aggression and conflict resolution.
- 16.3.3 Develop emergency response procedures for responding to violence and aggression.
- 16.3.4 Regularly test emergency systems, including duress alarms, response procedures, and communication systems.

Related MMRs

This document must be read alongside the following MMRs:

- [Unauthorised access to assets or sites.](#)



17. ASBESTOS & SILICA

Purpose: Eliminate or minimise the risk of fatality, or life changing illness from exposure to respirable asbestos or silica.

Hazardous materials assessment requirement

To identify any hazardous materials at an asset, you must:

- 17.1.1 Conduct a hazardous materials assessment using a qualified hygienist or obtain existing registers.

Product selection requirements

When selecting products or materials, you must:

- 17.2.1 Comply with regulations by prohibiting the use of engineered stone and materials containing asbestos.

Asbestos or silica related work requirements

When work may involve the disturbance of asbestos or silica, you must:

- 17.3.1 Eliminate or minimise the need to disturb materials containing asbestos or silica. If there is any doubt what the material contains, treat as if it is hazardous.
- 17.3.2 Ensure air monitoring is conducted where work might create respirable dust above the workplace exposure standard.
- 17.3.4 Establish health monitoring programs for workers where there is a risk of exposure to silica or asbestos above the workplace exposure standard.

Manage assets with asbestos containing material

Assets with known asbestos containing material must:

- 17.4.1 Maintain a documented asbestos register and asbestos management plan that is available to all workers.
- 17.4.2 Label any known asbestos containing material to warn of the risks.

Safely remove asbestos containing material

If required to remove asbestos containing material, you must:

- 17.5.1 Develop a documented asbestos removal control plan that includes safe removal methods including tools / equipment and personal protective equipment, exclusion zones, decontamination methods, and disposal requirements in accordance with local regulations.
- 17.5.2 Only use licensed asbestos removalists who are appropriately qualified for the volume and type of material being removed.

Requirements for cutting, grinding or drilling silica products

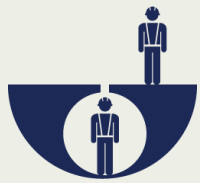
When cutting, grinding or drilling into concrete/stone-based products, you must:

- 17.6.1 Apply the hierarchy of control and implement isolation and engineering controls. Where dust is still produced, workers must wear fit-tested respiratory protective equipment based on a risk assessment.

Related MMRs

This document must be read alongside the following MMRs:

- [Demolition.](#)
- [Cultural heritage and environmental impacts.](#)



18. CONFINED SPACE ENTRY

Purpose: Eliminate or minimise the risk of a fatality or life changing injury from a person entering a confined space.

Design requirements	<p>During design, you must:</p> <ul style="list-style-type: none">18.1.1 Eliminate or minimise the need to enter a confined space.18.1.2 Make entry and exit points large enough for safe rescue.18.1.3 Ensure entry points to confined spaces have warning signs attached.
Planning requirements	<p>When planning work, or managing assets, you must:</p> <ul style="list-style-type: none">18.2.1 Identify and document all known confined spaces.18.2.2 Eliminate the need to enter the space, where possible.
Before entering a confined space	<p>Before entering a confined space, you must:</p> <ul style="list-style-type: none">18.3.1 Isolate and prevent accidental re-energisation of all hazardous energy sources connected to the space, including the risk of inrush.18.3.2 Test the atmosphere before entry using calibrated equipment.18.3.3 Ensure all workers are trained, competent and certified in their role.
Work inside a confined space	<p>If required to work inside a confined space, you must:</p> <ul style="list-style-type: none">18.4.1 Control entry using a confined space permit.18.4.2 Conduct air monitoring of hazardous contaminants and provide ventilation if hazardous fumes are present.18.4.3 Ensure equipment used is intrinsically safe, if there is a risk of a flammable atmosphere.18.4.4 Eliminate hot works wherever possible. Where elimination is not practicable, apply hot work controls to minimise the risk of fire or explosion.
Emergency response requirements	<p>To ensure effective emergency response, you must:</p> <ul style="list-style-type: none">18.5.1 Have a response plan in place, with emergency response equipment tested and tagged, according to the relevant Australian Standard, and readily available.18.5.2 Place a trained standby person at the entry point that has no other duties other than to monitor conditions and respond to emergencies if required.18.5.3 Establish effective means of communication between the people inside the space and the standby person.
Related MMRs	<p>This document must be read alongside the following MMRs:</p> <ul style="list-style-type: none">• Excavation, trenching and stockpiles.• Building fire.



19. CULTURAL HERITAGE & ENVIRONMENTAL IMPACTS

Purpose: Eliminate or minimise the risk of irreversible environmental harm due to impacts on cultural heritage, flora / fauna, waterways and land.

Assessment and planning

During the design of an asset, or development planning, you must:

- 19.1.1 Conduct environmental impact assessments to identify land contaminants, items or areas of cultural significance, protected flora or fauna, and proximity to waterways.
- 19.1.2 Engage with community stakeholders and traditional owners to understand the cultural sensitivity of the location and any controls or engagement required.
- 19.1.3 Develop environmental management plans based on the impact assessments and ensure plans are implemented and reviewed throughout key stages of development, construction and operation.
- 19.1.4 Have a documented process for managing unexpected finds or contamination events.

Site controls and prevention

To prevent environmental impact on-site, you must:

- 19.2.1 Construct, inspect, and maintain silt controls, dewatering systems, and contain or treat any discharges of hazardous substances.
- 19.2.2 Identify, contain, treat (if required), and dispose of contaminated materials in accordance with local regulations and environmental approvals.
- 19.2.3 Designate, bund, or contain wash areas for contaminated materials and ensure ongoing maintenance.

Cultural heritage and sensitive areas

Where cultural heritage and sensitive areas exist, you must:

- 19.3.1 Identify and protect areas of cultural or archaeological significance.
- 19.3.2 Identify and protect sensitive flora and fauna including wildlife corridors and water bodies.
- 19.3.3 Cease activities immediately upon discovering items of cultural or archaeological significance until assessed by a competent person.

Monitor controls

To monitor environmental impact controls, you must:

- 19.4.1 Regularly review environmental protection measures such as sediment barriers to confirm they remain effective.
- 19.4.2 Monitor water abstraction, water quality, and water discharge as required by regulations.

Related MMRs

This document must be read alongside the following MMRs:

- [Excavation, trenching and stockpiles.](#)
- [Demolition.](#)



GLOSSARY

Term	Meaning
Accredited laboratory	A testing or calibration laboratory that has been formally assessed and recognised as technically competent by an authorised accreditation body, most commonly the National Association of Testing Authorities (NATA).
Approve	Written permission or authorization granted by a relevant authority or organization to proceed with a specific action, process, or use of equipment.
Asset	Land, property, building, or infrastructure managed, developed, or constructed.
Authorised Person	An individual who has been given permission to access certain areas or perform specific tasks.
Certify	Officially recognize or confirmed in writing, that a person, product, or process meets specified standards or requirements.
Competent	Having the necessary skills, knowledge, experience, and ability to perform a specific task or job effectively and safely.
Complex lift	<p>Lifting operations that have increased risk due to factors such as the weight of the load, proximity to hazards, complexity of the lift, or potential consequences of failure.</p> <p>Specific examples include:</p> <p>Lifting activity:</p> <ul style="list-style-type: none">• A mobile crane/device will be lifting above 80% of rated capacity at any stage of the lift.• A tower or gantry crane lifting above 90% of rated capacity at any stage of the lift.• Lifts involving more than one crane.• Outriggers are adjacent to underground services, areas of poor soil or unknown ground conditions or load bearing value.• Helicopter lift.• Water vessel-mounted/barge crane lifts.• Lifts over public spaces, or in congested area where structures, pipelines, power lines, or other obstacles are located.• Loads over 50t. <p>Load conditions:</p> <ul style="list-style-type: none">• Unstable or has the potential to "turn", "flip", "shock load" and/or "side load" the crane.• Lifts out of the operators view.• Machinery or assemblies furnished by others or lifts where the load weight in not known.• Tilt-up and pre-cast concrete panels.• Workboxes with people inside.• Bridge beams or other risk assessed structural elements.• Critical equipment or high value items irrespective of weight.

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GLOSSARY

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Term	Meaning
Cultural or archaeological significance	The recognised value of a place, site, or object due to its cultural meaning or its ability to provide evidence of past human activity, warranting protection or special management.
Design envelope	The maximum operational reach, movement, and limits of plant or equipment, including attachments, loads, and dynamic movement.
Facade access equipment	Engineered systems and equipment designed to provide safe access to the exterior surfaces of a building or structure for inspection, cleaning, maintenance, repair, and replacement activities. This includes building maintenance units and swing stages.
Functional performance	The degree to which a permanent structure or fixing meets its intended operational purpose, including capacity, usability, serviceability, durability, and maintainability, across its design life and expected conditions of use.
Fixed plant	Equipment that is not easily moved and supports the operation of an asset Examples include cooling towers, pressurised water and gas systems, compactors, and generators.
High-risk service	Low Voltage (LV) and High Voltage (HV) electrical, High Pressure (HP) gas, or telecommunications connected to critical infrastructure e.g. hospital.
High-risk structures	<p>During demolition, the unplanned failure or collapse of the structure could result in fatality or extensive damage to nearby assets (i.e. structures, property, or services).</p> <p>Examples include:</p> <ul style="list-style-type: none">• Residential demolition - Double storey (>6m high). (e.g. homes)• Billboards > 6m. (e.g. marketing signs)• Commercial demolition (e.g. mutli-story office building).• Industrial demolition. (e.g. manufacturing facilities, warehouses)• Infrastructure demolition. (e.g. bridges, utilities)• Demolition methods using machinery on suspended floor.

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GLOSSARY

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Term	Meaning
	Complex in nature and requires a higher level of expertise and control due to the risk. This includes:
Formwork	<ul style="list-style-type: none"> Formwork erected at significant heights above ground level such as high bay Formwork for a Jumpform Formwork that uses a combination of different proprietary systems such as bondek and tables, pafili and Peri. Needled Formwork
Precast panel systems	<ul style="list-style-type: none"> Propping of vertical precast panels Double stacked vertical precast panels
Civil and excavation	<ul style="list-style-type: none"> Temporary walers, anchors and struts used to resist wall movement Road plates Sheet piling greater than 5m high Loading platforms for plant suspended over works Needling of structures greater than 2 storeys high Non-proprietary retention systems
High risk temporary works	<ul style="list-style-type: none"> Double stack sheds on standard B Class B Class hoarding used to support other temporary works Double stack hoarding over high-risk areas
Tower cranes	<ul style="list-style-type: none"> Tower crane bases Standard tower crane climbing Erect / dismantle standard core climber / free standing / tie Tower crane cantilever grillage Tower crane with offset tower section
Scaffold	<ul style="list-style-type: none"> Non-proprietary scaffold loading platforms Catch fans Overhead protection systems Craneable scaffolds Hanging scaffolds Cantilevered / needled/ spurred scaffold
Other construction plant	<ul style="list-style-type: none"> Formwork hoists Pump tower bases Man / material hoists (Proprietary Alimak Hoists) Jumpform Propping for mobile cranes on suspended slabs Swing stage hoist platforms Design of mobile crane pads

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GLOSSARY

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Term	Meaning
Importance level assessment	Is a mandated classification of a building or structure based on the consequences of failure, used to set the required structural reliability and design loads.
Independent	Free from involvement in the original design, installation, construction, or decision-making process, and without any conflict of interest that could compromise impartiality or objectivity.
Licensed	Permitted to perform certain activities or provide specific services, after meeting regulatory requirements and obtaining a license from a governing body.
Light Electric Vehicles	A category of smaller, lighter electric-powered vehicles such as e-bikes, e-scooters, electric skateboards, and electric mopeds.
Live electrical work	Is electrical work carried out on, or in close proximity to, electrical equipment or installations that are energised above extra-low voltage, where a person may be exposed to live conductors, live parts, or the risk of electric shock, arc flash or arcing due to the uncontrolled release of electrical energy.
Peer review	An independent review of a design or process by a qualified person not involved in the original work, ensuring impartiality and objectivity.
Permanent personal fall protection systems	A fixed, engineered system that is permanently installed on an asset to protect individuals from falling while working at height. Examples include fixed anchor points and horizontal or vertical lifeline systems.
Permanent ground support system	Is an active engineered system designed to provide long-term retention of soils. Examples include retaining walls, shotcrete, rock bolting and ground anchors.
Permit-to-work system	A formal, documented system used to control high-risk activities by defining the scope of work, hazards, controls, and sign-off processes.
Positive ground support system	An active engineered system designed to provide positive lateral support to the walls of an excavation, actively bracing or reinforcing the excavated face to prevent soil movement and collapse (e.g. hydraulic shoring, steel sheet piling, soldier sets, trench shields).
Protected flora and fauna	Plant and animal species that are legally protected under Australian environmental legislation, meaning their killing, injury, disturbance, removal, collection, or habitat damage is restricted or prohibited without approval.
Qualified	Having the required education, training, certification, or credentials to perform a particular role or task.

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GLOSSARY

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Term	Meaning
Suspended heavy structures	An element, fixture or feature of a building or structure that is suspended or fixed in an elevated location where, if fixings fail and the object falls, a reasonable consequence would be a fatality.
Temporary works	A structure or system required to support construction activities and ensure safety until the permanent works are complete.
Unique design	A structure or element that is custom-designed and not standard or typical in configuration or use.
Work authorisation process	A process to ensure that work is only carried out with permission and controls in place.
Working at height hierarchy of controls	To eliminate or minimise the risk of falls, in order of preference: <ol style="list-style-type: none">1. Work on the ground (e.g. eliminate falls)2. Work on a solid construction (e.g. Permanent floors, completed concrete slabs, structurally sound platforms)3. Use fall prevention devices (e.g. Guardrails and edge protection, scaffolding, safety mesh)4. Use work positioning systems (e.g. Industrial rope access systems, fall restraint)5. Use fall-arrest systems (e.g. Harnesses with inertia reels, safety nets, catch platforms)6. Administrative controls (e.g. exclusion zones and signs)7. Ladders (e.g. portable ladders, fixed ladders)
Zone of influence	The volume of soil around an excavation that can be affected by any external load.