

MOBILE PLANT

SAFELY CONTROLLING WORK CRITICAL RISK CONTROL DOCUMENT



We are always licenced and competent when operating plant



We always isolate all energy sources before working on equipment and systems



We come to work free from impairment, alcohol and drugs



We ensure plant and equipment is safe to use



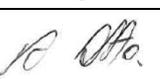
We store, handle and control hazardous substances safely



We always observe walkways, safe zones and exclusion zones



We always make sure loads are secure and within safe working load limits before moving them

DOCUMENT CONTROL			
Document Name	Mobile Plant		
Issue Date	01-June-2022		
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DOCUMENT REVIEW			
Date	Revision	Description of Change	Author
1-Dec-2021	1	First document	AE, MJ, OG
1-Jun-2022	2	<ul style="list-style-type: none"> • Included page numbers • Added a picture from the Mobile plant safety zone – thumbs up • Added statement to ensure vehicle rollover included in emergency/rescue plan • Adjusted the training unit standard for Forklift to include 10851/2 • The Ryman Christchurch Office Health and Safety Coordinator must be contacted to arrange trainings for site to maintain consistency • Added a sentence confirming that any licence with the letter “L” means that the licence owner is a Learner for that class of licence • Adjusted the single wall thickness test is monthly instead of weekly as per the WorkSafe Health and Safety during concrete pumping document • Adjusted the double wall thickness test to follow the manufacturer instruction as per the WorkSafe Health and Safety during concrete pumping document • Added a new requirement for concrete pump (complete inspection checklist/Quipcheck prior to operations) • Linked the Telehandler at Ryman Healthcare document 	AE, MJ, OG, AVR, JB

Mobile Plant

Mobile plant is plant that is powered or self-propelled, such as vehicles and equipment. Examples include telehandlers, excavators, forklifts, rollers, graders, concrete trucks, mobile concrete pumps, elevated work platforms, backhoes, trenchers, and vehicles like cars, vans, trucks and tipper trucks used onsite. This document does not apply to operation of personal vehicles on-site within the parking area. These vehicles and operators are still subject to site speed limit rules and all land transport rules.

Some activities on our construction sites that involve mobile plant include:

- Delivery of supplies and materials
- Transportation of materials around site
- Excavations
- Concrete pours
- Using a telehandler
- Using a forklift
- Using a roller
- Using a grader
- Using an elevated work platform (EWP)
- Using a self-propelled and/or manned vehicle

Related safely controlling work documents:

- [Excavations](#)
- [Elevated Work Platforms \(EWP\)](#)
- [Overhead and Underground Services](#)
- [Cranes, Hoists and Other Lifting Activities](#)
- [Work at Height, dropped object and Temporary Work Platforms](#)
- [Precast, concrete pours, temporary works and structural integrity](#)

Risks - What could go wrong?

- Striking people, other plant or structures (e.g. from unauthorized access) causing a fatality or a major injury such as crushing, dislocation, fractures or serious head injuries
- Crushing with other mobile plant, loads, structures causing fatality or injury such as major injury such as dislocation, crushing, strains/sprains, bruising/lacerations, fractures or serious head injuries
- Overturn of plant due to operator error or unstable/uneven ground causing fatality or major injury such as dislocation, crushing, strains/sprains, bruising/lacerations, fractures or serious head injuries
- Uncontrolled movement of plant due to mechanical failure or operator error (e.g. no handbrake) causing fatality or major injury such as dislocation, crushing, strains/sprains, bruising/lacerations, fractures or serious head injuries
- Striking overhead or underground services (e.g. power lines, cables, gas pipes) causing fatality or major injury such as electrocution, electric shock, arching, burns or fatality from fire/explosion or property damage
- Lifting failure causing injury (see 'Cranes, Hoists and Other Lifting Activities' if your work poses a risk of lifting failure)
- Mechanical/attachment failure (e.g. dropped bucket/fork) causing an event such as a dropped load, roll-over or tip-over that may result in a fatality, major injury and/or property damage

- Fall from height (e.g. plant cab, truck bed) causing injury (see ‘Work at Height, dropped objects and temporary work platforms’ if your work poses a risk of falling from height)
- Dropped objects/loads due to incorrect quick hitch setup/locking pin causing injury to others (see ‘Work at Height, dropped objects and temporary work platforms’ if your work poses a risk of dropped objects)
- Operator fatigue/distraction/human error or impairment causing operator error

Controls – How do I keep safe?

The identification of risks associated with the use of mobile plants and appropriate control measures must be fully detailed in a Safe Work Method Statement (SWMS) or similar risk-assessment document prior to commencing any work involving mobile plant.

Can I eliminate the risk?

Wherever work can be completed without the need to use mobile plant, this should be the first consideration in eliminating risk.

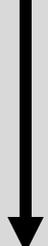
The SWMS must be reviewed by an appropriate Ryman representative prior to any work commencing and following any changes to the task or environment

Selecting the right equipment for the job

When planning the use of mobile plant, the following things should be considered:

- The ground conditions:
 - Stability
 - Space available
 - Gradient
- If lifting, the size, weight of the load as well as other properties in the load that may affect the lift
- Environmental conditions e.g. rain, wind, thunderstorms
- Overhead or underground services
- Pedestrian movements or congested area

Mobile plant controls include but are not limited to:

	Control Type	Control Measure	Control Level
	Elimination	Remove risk by not requiring the use of mobile plant	Most Effective Control  Least Effective Control
Minimization	Substitution	Select the right mobile plant that is fit for the task and therefore presents less risk – e.g. use of the correct size machine for the job and ground conditions. When hiring plant, select more equipment that has additional safety devices – e.g. warning devices, reversing cameras, operator protective structures such as ROPS, FOPS, TOPS, OPS and/or COPS	

Control Type	Control Measure	Control Level
Isolation	Isolate the working area to control unauthorized personnel or plant access and collision with other plant. Isolate with fencing where practicable, or cones, barriers, tapes, bunting etc Lock Out Tag Out of damaged equipment to prevent operation	Most Effective Control  Least Effective Control
↑ WORK ABOVE THE LINE WHERE POSSIBLE TO CONTROL RISK ↑		
Engineering	Reversing cameras Operator protective structures such as roll-over (ROPS), tip-over (TOPS), cabin operator (COPS) and falling object (FOPS) protective structures Warning devices – e.g. travel indicators, audible alarms, horns, beacons, immobilizer lights on excavators Use detection equipment to locate underground services Wheel chocks (consider using a minimum of two chocks, and 25% diameter of wheel size)	
Administrative	Communication and planning such as pre-start meetings Maintenance and inspection including daily pre-start inspections and scheduled maintenance Spotters (trained and competent) to provide guidance to mobile plant operators and control pedestrian traffic Blindspot map and ‘Safe Zones’ for different mobile plant to be communicated as part of the induction	
PPE	This includes the use of mandatory PPE including hard hat when exiting the mobile plant that complies with (AS/NZS 1801:1997), high visibility vest (to include day/night glow strips) (AS/NZS 4602.1) and safety footwear (AS/NZS 2210.3:2002)	

NOTE: Where the risk cannot be eliminated, a combination of control measures may be appropriate.

Safe driver

Recommendation

- Park on level ground where possible and ensure wheels are chocked where there is a risk of moving such as when on a gradient/slope (minimum of two chocks, and 25% diameter of wheel size)

Minimum control

- All operatives of mobile plant shall be trained and competent to the requirements set out by Approved Codes of Practice, best practice guidelines issued by WorkSafe NZ and any additional requirements specified by Ryman Healthcare
- Plant must be operated within the safe working limits parameters and limits of the vehicle's abilities. For example, only traveling on gradients that are inside of the plant's ability. Make sure this key information is gained as part of a new driver's familiarization with the plant
- Turn the machine off, lower any attachments, apply the handbrake and take the keys with you when you are exiting the vehicle. Mobile plant must never be left unattended with the keys in
- Stay in the cab when a load is raised
- Delivery drivers to stay in the cab unless required for loading/unloading
- Remain vigilant and keep free of distractions from cell phone
- All people in the machine must wear the seatbelts provided, adjusted and fastened correctly
- No passengers in unapproved seating (no seat no ride)
- Stay a minimum of 1m clear of the edge of the zone of influence of any excavation

Safe vehicle**Minimum control**

- Pre-operational checks (e.g. Quipcheck) carried out prior to operation and include those areas stipulated by plant manufacturer
- All mobile plant must be serviced and maintained in line with manufacturer's requirements and a record kept of these
- Vehicle handbook/logbook must always be kept in the cab for ease of reference
- All mobile plant should be fitted with:
 - A warning beacon (revolving light)
 - A functional reversing indicator where installed by the manufacturer
 - Fit for purpose reversing, wing and rear-view mirrors where installed by the manufacturer
- Quick hitches must be in place including any safety devices i.e. safety pins or safety wedges (excavator)

Safe site**Minimum control**

- All mobile plant shall operate in compliance with the Traffic Management Plan (TMP)
- Mobile plant emergency rescue plan in place (including Vehicle Rollover Emergency)
- Trained spotters must be used when reversing or working in close proximity with other workers/structures
 - If the presence of a spotter poses more risk, other controls may be implemented to reduce risk. For example, isolating the working area to control unauthorized personnel or plant accessing the working area and collision with other plant. The area should be isolated with fencing where practicable, or cones, barriers, tapes, bunting etc. If it is deemed that the use of a machinery spotter presents more

risk, assessment of this decision and identification of alternative controls must be recorded in a risk assessment. This must be approved by a member of Site Management

- All mobile plant operators and other people onsite must adhere to barriers, speed limits and designated safe zones ([Mobile Plant Safe Zones – Ryman Healthcare](#)) for the mobile plant they are operating. i.e. no one unauthorized should enter within 4 metres of the maximum reach of the plant. Any person must confirm it's safe to approach within the 4 metre zone using a 'thumbs up'
- All pedestrians must adhere to site walkways and ensure to receive a 'thumbs up' before moving out of the barricaded walkway ([Mobile Plant Safe Zones – Ryman Healthcare](#))

DO YOU KNOW YOUR SAFE ZONES?

Moving around Mobile Plant



See Telehandler and Concrete Pump sections for additional minimum control requirements for these types of plant.

Training and Competency

All operatives of mobile plant shall be trained and competent to the requirements set out by Approved Codes of Practice, best practice guidelines issued by WorkSafe NZ and any additional requirements specified by Ryman Healthcare.

Copies of licences and training records must be held for all agency and Ryman Healthcare mobile plant operators on site. Contractors who provide mobile plant operators must supply a current competency matrix or training register and update where changes are made to personnel and their records. Contractors are to have processes in place to monitor any change of license status of their workers and sub-contractor workers. All certificates/licences for mobile plant operations must have the original certificate sighted (either during the induction or alternative).

Training and competencies include:

Plant	Minimum Training and Competencies
Operating an excavator	<ul style="list-style-type: none"> NZQA 16703 – Demonstrate knowledge and skills for driving on a road for endorsement T (tracks)
Operating a telehandler	<ul style="list-style-type: none"> The forklift unit standard (10851) NZQA 23637 – Operate a telehandler NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels) "F" Driver Licence Endorsement Certificate of Competency issued by a Ryman Healthcare approved assessor (arranged through the office-based Health and Safety Team)* *Ryman Healthcare has identified inconsistencies in the quality of unit standard training provided in relation to telehandler operation. Therefore, personnel must be assessed as competent, and issued a Certificate of Competency by Ryman Healthcare’s approved training provider. Training provider/s are approved following review and consideration of the trainer’s industry knowledge, experience, expertise and qualifications. Competency assessments can be organised through the site Health and Safety Team.
Operating a forklift	<ul style="list-style-type: none"> Unit standard 10851/2 – Operate a powered industrial lift truck fitted with forks (issued or refreshed in the past 3 years) "F" Driver Licence Endorsement
Operating a tractor	<ul style="list-style-type: none"> NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels)
Operating a bulldozer	<ul style="list-style-type: none"> As applicable for the machine: NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels) NZQA 16703 – Demonstrate knowledge and skills for driving on a road for endorsement T (tracks)
Operate a skid steer	<ul style="list-style-type: none"> As applicable for the machine: NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels) NZQA 16703 – Demonstrate knowledge and skills for driving on a road for endorsement T (tracks)
Operating a grader	<ul style="list-style-type: none"> NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels)

Operating a front loader	<ul style="list-style-type: none"> NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels)
Operating a trencher	<ul style="list-style-type: none"> As applicable for the machine: NZQA 16701 – Demonstrate knowledge and skills for driving on a road for endorsement W (wheels) NZQA 16703 – Demonstrate knowledge and skills for driving on a road for endorsement T (tracks)
Operating a roller	<ul style="list-style-type: none"> NZQA 16702 – Demonstrate knowledge and skills for driving on a road for endorsement R (rollers)

In addition to:

Any mobile plant or vehicle	Full New Zealand Drivers Licence
Any vehicle not more than 6000kg	1F – Class 1 Full licence (in addition to any endorsement)
A rigid vehicle with a GLW of more than 6000kg but not more than 18,000kg, and a combination vehicle (not tractor/trailer) less than 12,000kg	2F – Class 2 Full licence (in addition to any endorsement)
Combination vehicle between 12,000 and 25,000 GCW kg	3F – Class 3 Full licence (in addition to any endorsement)
A rigid vehicle (including any tractor/trailer) with a GLW of more than 18,000kg	4F – Class 4 Full licence (in addition to any endorsement)
Combination vehicle more than 25,000kg GCW	5F – Class 5 Full licence (in addition to any endorsement)

Licences with the Letter “L” means that the licence owner is a learner for that class of licence. Additional licensing information can be found on the NZTA website.

Supervision

Persons training, or supervising inexperienced workers, must be deemed appropriately trained and competent by their company to train or supervise others within that field.

When assessing the level of supervision required by a trainee, the supervisor or trainer must assess several factors, including but not limited to;

- The worker’s experience and competency
- The nature of the work
- The nature of the risks associated with the work including the worksite
- The control measures in place while the worker being supervised is carrying out the work

Inexperienced workers require ‘close supervision’, this means there must be direct and constant one-on-one management in place.

Approval must be sought from the Project Manager or delegated authority prior to any inexperienced workers operating plant.

Spotters

Machinery spotters must be in place for any mobile plant movements where the plant is required to reverse or operate in close proximity to other workers or structures. A Spotter is used on site to help ensure separation of workers and moving plant. The role of a Spotter is to assist the plant operator in safely maneuvering the vehicle to prevent injury or property damage. Their role is also to ensure others in the vicinity are kept at a safe distance to ensure their safety. Spotters shall be trained on their assigned responsibilities, understand basic operating procedures of equipment they are spotting for, the hazards of the equipment and the working environment.

Note: If it is deemed that the use of a machinery spotter presents more risk, assessment of this decision and identification of alternative controls must be recorded in a risk assessment. This must be approved by a member of Ryman Site Management.

Training and Competency

Spotters	Contractors own Spotter Training Programme
Spotters	Ryman Healthcare Spotter Training Certificate issued by a Spotter Trainer
Spotter Trainer	Ryman Healthcare Spotter Trainer Certificate (Issued by an approved Ryman Trainer)

Telehandler

The telehandler is a multi-use piece of equipment that can be found under many names, including telescopic handler, or teleporter. The boom can be fitted with different attachments, such as a bucket, **pallet** forks or **winch**.

Minimum Control Requirements

- Telehandler’s fitted with a Cardan shaft parking brake are not allowed to operate on a Ryman Healthcare site as this has attracted failure in use on our sites. Sites must comply with [Telehandler at Ryman Healthcare](#) requirements
- Authorization by the Project Manager, Site Manager or Site Foreman is required daily prior to use
- Deploy the stabilisers on firm, level ground, and place the forks/attachment on the ground prior to leaving the plant
- No passengers can travel in the driver’s cab
- Fitted with an inclinometer
- Park on level ground where possible and ensure wheels are chocked where there is a risk of moving such as when on a gradient/slope (minimum of two chocks, and 25% diameter of wheel size)

Telehandler safe operating guidelines (in addition to the ‘General Safe operating guidelines listed previously in Mobile Plant):

Minimum Control Requirements

- Must immediately advise a member of the site management team if a telehandler is not in good working order or has failed any of its checks

- Must complete pre-operational checks (e.g. Quipcheck) carried out prior to operation and include those areas stipulated by plant manufacturer
- Must ensure no one attempts to operate the plant until it has undergone the necessary repairs or maintenance work and it has been cleared for use by a qualified and competent person (refer to the agent or dealer)
- Is prohibited from carrying out any repairs themselves, unless trained for the purpose
- Needs to ensure that ongoing servicing is carried out by a qualified person (refer to the agent or dealer)
- Must ensure the correctly rated tyres are fitted and match the environment the plant is used
- Must check daily that a serviceable extinguisher remains inside the cab

Concrete Pump

A concrete pump is a machine used for transferring liquid concrete by pumping. This includes boom concrete pumps or trailer-mounted concrete pumps. Additional information is available in the Pre-cast, concrete pours, temporary works and structural integrity Safely Controlling Work document

Minimum Control Requirements

- **No KCP pumps** are permitted on Ryman sites due to previously identified health and safety concerns
- Complete pre-operational checks (e.g. Quipcheck) carried out prior to operation and include those areas stipulated by plant manufacturer
- Outriggers must be fully extended. If outriggers are not able to fully extended, the reduced safe operating radius must be known and recorded in a risk assessment
- Prior to use on any concrete pump, the operations shall be subject to geotechnical assessment and approval before commencing work. Suitability of ground conditions must be validated in a report by a Geotechnical Engineer. A geotechnical assessment may not be required if one has already been done for the work area that confirms suitability of the planned operations, and there is no change in the ground conditions that could make the area unsafe. If in doubt, consult the Geotechnical Engineer who may suggest the requirement of a specific report. Factors to consider when determining in a specific geotechnical assessment is required include but are not limited to:
 - Surface conditions – consideration of the weight of the concrete pump, placement, and stability of outriggers and bearing support or shoring requirements (as applicable), uneven, unstable, or sloping of ground.
 - Underground services or excavations that could affect stability and zone of influence (ZOI).
 - Post Inclement weather conditions.
 - Soil test data reports
 - Other relevant site information, such as underground service plans; environmental plans
- Physically isolate the pump operations from other operations
- Drainage covers / sausages on storm water drainage
- Interlock guard fitted to hopper grill with full cover
- Ground stability – Ensure concrete pump and vehicles used on stable/level ground

- Inspection cap fitted with safety chain
- Pipeline discharge end fitted with cage during cleaning operations
- Whip check / tether using sling/chain
- Thickness testing for single wall lines and ensure pressure is appropriate for correct thickness by the operator (monthly)
- Internal testing for double wall lines. Follow the manufacturers recommendation (e.g. some manufacturer normally allow the pump to go through 60% of life before testing requirements. Once 60% is achieved then monthly visual check of internal line or thickness testing of outer wall).
- Locking pin / R pin on pipe clamps/connections
- Pump maintenance checks and ensure no use of damaged pipes
- Training/licenses as per the concrete pumping best practice guidelines
- Boom pump/plant checked for current annual inspection certificate
- Spotter to be close to stop button which needs to be pressed if air is available in line/hose

Notifiable Work:

If your work involved lifting operations or excavations, refer to those documents for information on Notifiable Work.

References and Resources:

- [Keeping safe around moving plant – Fact sheet - WorkSafe](#)
- [Managing work site traffic – Good practice guidelines](#)
- [Vehicles and mobile plant - WorkSafe](#)
- [Driving Safely website](#) (NZTA, NZ)
- [Approved Code of Practice for Operator Protective Structures on self-propelled mobile mechanical plant](#), (1999)
- [Safe Work with Precast Concrete](#)
- [Health and Safety During Concrete Pumping](#)
- [Ryman Healthcare Mobile Plant Policy](#)
- [Using quick hitches safely \(WorkSafe NZ\)](#)
- [A guide to workplace transport safety](#) (HSE, UK)
- [Mobile Plant Safe Zones – Ryman Healthcare](#)
- [Telehandler at Ryman Healthcare](#)