

PROCEDURE

Title: **Operation of Mobile Equipment**

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1.0 PURPOSE

The purpose of this procedure is to define the driving requirements for mobile equipment at QAL. This document should be read in conjunction with the detailed manufacturer's operating instructions for different mobile equipment and the Mobile Equipment Standard procedure P314.707

2.0 SCOPE

The scope of this procedure covers operation of all mobile equipment on the QAL site including company vehicles, contractor vehicles and private vehicles. Mobile cranes are covered by Procedure P314.414. Forklifts are covered by Procedure P314.706

3.0 RESPONSIBILITIES

Legal and Other Requirements

QAL is committed to manage mobile equipment and driving in accordance with legal and other requirements. A comprehensive list of legal and other requirements for mobile equipment and driving is located in the Legal Obligations Manual located on Portal under Qnet/HSEC. Reference to frequently used Australian Standards and legislative requirements are listed on Portal.

3.2 Roles and Responsibilities

Role	Responsibility
Superintendents / Contractors	Implement the requirements of this procedure within their area for all mobile equipment activities. Ensure that suitably trained persons are licenced and competent to operate mobile equipment.
Safety Standing Team – C3 – Vehicles and Driving	One role of the Safety Standing Team C3 – Vehicles and Driving is to review and recommend changes to: <ul style="list-style-type: none"> • P314.701 Operation of Mobile Equipment and W314.701.01 Tyre Management Plan • Project related Traffic Management Plans • P314.707 Mobile Equipment Standards This team does not co-ordinate the execution of normal road or mobile equipment maintenance, nor create Project Statements for future improvements to these assets.
Superintendent Health, Safety & Security	Approve an exemption from wearing a seatbelt on medical grounds. Approve an exemption to driving on site without a QAL driving competency assessment CTO (Eg. Tour Bus Driver)

Role	Responsibility
Mobile Equipment Owner	<p>Audit the system.</p> <p>Mobile equipment is operated and maintained to the standard defined in this procedure and in line with appropriate asset standards.</p> <p>Mobile equipment is made available for scheduled maintenance and repair.</p> <p>Mobile equipment used for work purposes undergo a risk assessment and the risk assessment is reviewed annually.</p> <p>Ensure drivers who are required to use vehicles off site hold a current vehicle drivers licence for that class of vehicle.</p> <p>Ensure persons operating mobile equipment are licenced and authorised under the mobile equipment driving competency CTO and that records of competency are maintained.</p>
Supervisors	<p>Ensure risk assessments are re-validated at any time the scope of work changes or the risk of mobile equipment operations changes.</p> <p>Ensure completion of mobile equipment Pre-Start Check Sheets.</p> <p>Ensure that parking, and lay down areas are maintained in a safe, clean and tidy condition, and that designated safe parking areas are established and incorporate fundamentally stable parking.</p> <p>Ensure their team members operating mobile equipment are licenced and competent.</p>
Maintenance Planners/ Schedulers /Maintainers	<p>Ensure requirements of this procedure and manufacturers' guidelines/instructions are followed during the planning of routine servicing, modification and maintenance of mobile equipment.</p>
Mobile equipment Operators	<p>Maintain their driving licence as required by legislation.</p> <p>Maintain their mobile equipment driving competency CTO within the renewal period as specified in this procedure.</p> <p>Complete inspections and ensure pre-start checklists are filled in correctly.</p> <p>Use all site mobile equipment in a safe manner and operate within the rated load capacity.</p> <p>Adhere to all site speed limits and road restrictions.</p> <p>Ensure the driver and all passengers wear their seatbelts at all times.</p> <p>Report all near hits, incidents and mobile equipment damage to their Supervisor immediately and ensure the incident scene is preserved.</p> <p>Park the mobile equipment in a fundamentally stable position and use a designated safe park area whenever possible.</p>
First Response Co-ordinator	<p>Ensure emergency response persons are trained and competent to operate site emergency services vehicles.</p>

4.0 REFERENCES

- P001.010 Control of Entry To and Exit From the Site
- P301.081 Employee Code of Conduct
- P312.605 Competent to Operate Specified Equipment

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P314.260 Isolation, Tag and Lockout Procedure
 P314.302 Road Closure and Part Road Closure
 P314.413 Oxy Fuel Gas Systems – Safe Use and Maintenance
 P314.414 Cranes and Lifting
 P314.706 Operation of Forklifts
 P314.707 Mobile Equipment Standards
 P315.102 Protective Equipment – Plant Minimum Requirements
 P401.027 Accidents Involving Company Vehicles, Hire, or Lease Vehicles
 W314.701.01 Tyre Management Plan
 QM50-140-02 Trailers and Towing Accessories Engineering Standard
 SM76 Mobile Equipment Training Module
 Workplace Health and Safety Act 1995 Part 3
 Workplace Health and Safety Regulation 2011
 Rio Tinto Performance Standard – C3 Vehicles and Driving
 Rio Tinto C3 Light Vehicle Driving Guideline, 2005
 Rio Tinto C3 Vehicle and Driving Guidance Note, 2005
 Rio Tinto C3 Tyre and Rim Guidance Notes, 2009
 Code of Practice – Plant
 Transport Operations (Road Use Management) Act 1995 Schedule 4 – Dictionary.
 Transport Operations (Road Use Management – Vehicle Registration) Regulation 1995
 Transport Operations (Road Use Management –Road Rules) Regulation 2009
 Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation 2010
 Transport Operations (Road Use Management – Mass, Dimensions and Loading) Regulation 2005
 Vehicle Standards Bulletin (VSB1) – Building Small Trailers
 Australian Design Rules
 Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG 07).
 AS 1698 Protective Helmets for Vehicle Users
 AS 1742 Manual of Uniform Traffic Control Devices
 AS 1801 Occupational Protective Helmets

5.0 DEFINITIONS

Term	Definition
Mobile Equipment	<p>Any mechanically or electrically driven machine capable of moving under its' own power and requires a driver/operator.</p> <p>Mobile equipment is under the control of an operator and includes a trailer attached to the equipment, and heavy machinery equipment. Examples include but are not limited to:</p> <ul style="list-style-type: none"> • Regardless of engine capacity, all hoists, mobile truck mounted concrete placing booms, load shifting equipment, dozers, excavators, forklifts, front-end loaders, backhoes, graders, order picking forklift trucks, boats, road rollers, skid steer loaders, and scrapers. • Tractors, road sweepers etc. • Remotely controlled mobile equipment. • It includes any form of transport that moves on wheels and a hovercraft; but not a train or tram. <p>(Transport Operations (Road Use Management) Act 1995 Schedule 4 – Dictionary).</p>
Gross Vehicle Mass (GVM)	The maximum design load of a vehicle including the weight of the driver, passengers, load being carried and the vehicle body.

Term	Definition
Light Vehicles (LV)	<p>“Light vehicles” are any vehicle weighing less than 4.5 tonnes gross vehicle mass (GVM), as per Queensland road rules.</p> <p>For the purpose of these rules, light vehicles are vehicles, personnel carriers and miscellaneous vehicles comprising:</p> <ul style="list-style-type: none"> • Cars, 4WD sports utility vehicles, pickups, utilities, mini loaders (Dingo). • Personnel carriers such as long wheel base “troop carriers” light trucks with crew cabins and other vehicles designated from time to time as personnel carriers. • Side By Side passenger ATV. • Any vehicle that requires the driver to hold a Queensland car drivers licence.
Medium Vehicles	<p>“Medium vehicles” are any vehicle over 4.5 tonnes GVM, but excluding the heavy machinery equipment.</p> <p>Examples of medium vehicles include:</p> <ul style="list-style-type: none"> • Buses carrying 12 or more persons • large forklifts and telehandlers; • small front end loaders and back hoes; • service trucks; and • tippers including gravel trucks, bulk materials delivery trucks and road trains (heavy).
Heavy Machinery Equipment	<p>“Heavy Machinery Equipment” includes mobile equipment such as:</p> <ul style="list-style-type: none"> • bulldozers, graders, loaders, rubber tyred backhoes, scrapers, compactors, agricultural tractors, rubber tyred dozers; • rear dump trucks carrying overburden, refuse, rehabilitation material; • water trucks, road sweepers and all excavators.
Elevated Work Platform	<p>A mobile machine (device) that is intended to move persons, tools and material to working positions and consists of at least a work platform with controls, an extending structure and a chassis, but does not include mast climbing work platforms.</p>
Road	<p>Designated roads; as per QAL Drawing 155623 Roads. It includes refinery roads, external roads, dirt and haul roads.</p>
Fundamentally Stable	<p>When related to parked mobile equipment, means the mobile equipment can be left unattended without the possibility of it moving under its own energy, or the influence of gravity. The test is if the engine is off, gears in neutral and all brakes disengaged, the mobile equipment does not move.</p>
Bike	<p>Tricycle or quad bike that are powered or self-propelled mobile three or four wheeled bike.</p>
Trailer	<p>A vehicle that is built to be towed, <u>or is towed</u>, by a motor vehicle, but does not include a motor vehicle being towed. (Transport Operations (Road Use Management) Act 1995 Schedule 4 – Dictionary).</p> <p>All trailers shall be compliant with QAL Engineering Standard QM50-140-02 Trailers and Towing Accessories.</p>
CTO	<p>A competency based assessment process authorising personnel to operate specific equipment within QAL.</p>
Authorised to Drive/Operate	<p>A person holding a valid State or Territory licence for the specific equipment, and/or a mobile equipment driving competency CTO for the specific equipment.</p>

Term	Definition
Positive Communication	Communication to which there has been a response of recognition from the party being contacted.
QAL Site	All property owned or leased by QAL
RDA	Residue Disposal Areas
Operational Area	Includes all areas of the Refinery bounded by the perimeter fence and the RDA.
QAL Roads Open to the Public	Roads on QAL owned or controlled property that members of the public have unrestricted access to. Roads include Harbour Road and Entrance Road on the South side of the QAL West and Main Security Gates, QAL Main Car Park, Admin Crescent, Recreation and Boggo Roads, East Car Park, and any other QAL provided car park that is external to the Plant boundaries. Note: Harbour Road north of the West Security Gate is not a road open to the public, access is controlled and monitored by QAL.
Wheel Chocks	Devices designed to be placed in front of or behind a wheel of the mobile equipment (or both), to prevent the mobile equipment moving forwards or backwards.
Bulk	In relation to the transport of dangerous goods, bulk is defined as: <ul style="list-style-type: none"> • Gases (Class 2) in a container having a capacity exceeding 500 litres • All other classes in a container having a capacity exceeding 450 litres, and in a container having a net mass exceeding 400 kilograms

6.0 ACTIONS

6.1 Licencing and Competencies

All mobile equipment drivers required to drive on the QAL site shall hold a relevant current State or Territory licence and a mobile equipment driving assessment CTO for the class of mobile equipment that they are to operate. People holding a Learners Licence will not be allowed to drive on site.

The mobile equipment driving competency assessment CTO shall be valid for three years. The Health Safety & Security Superintendent may approve an exemption for driving on the site without a QAL driving competency assessment CTO (eg. Tour bus driver, delivery driver).

In the case of a person's State or Territory driving licence being disqualified or suspended, the person shall notify their Supervisor of this situation. In order to continue operating mobile equipment as part of the person's role under a QAL CTO while in the refinery, approval must be sought from their Department / Contractor Manager. If approval is given, the operator shall be restricted to the areas within the confines of the Plant boundaries as defined by the Main, West and East Security Gates or other areas owned or controlled by QAL that are **not** open to the public. Any loss of a Certificate of Competency for a prescribed occupation issued by Workplace Health & Safety means the person cannot operate that mobile equipment under any circumstances.

6.2 Traffic Regulations

Unless otherwise specified, Queensland Road Rules apply to the QAL site.

6.3 Access to Site

All mobile equipment shall comply with P001.010 Control of Entry To and Exit From the Site, to gain access to site.

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6.4 Mobile Phones

All drivers are banned from using a mobile phone that is held in the hand while driving.

6.5 Seat Belts

The wearing of a correctly adjusted and fastened seat belt or approved personal restraint device is mandatory for drivers and passengers travelling in all mobile equipment and mobile powered plant unless exempted by Section 267 of Transport Operations (Road Use Management – Road Rules) Regulation 1999 and approved by the Health Safety & Security Superintendent. Drivers shall check that all passengers are seated and wearing a seat belt before moving the mobile equipment.

6.6 Passengers in Mobile Equipment and Mobile Powered Plant

The number of passengers in mobile equipment and machines shall not exceed the seating available as supplied by the manufacturer. Passengers shall occupy a seat provided while the equipment is in motion and shall never ride in the tray of a vehicle.

No pillion passengers are permitted on tricycles or quads.

6.7 Smoking in Mobile Equipment

Smoking is strictly prohibited in all mobile equipment at all times. This includes when driving, operating, refueling or when checking batteries.

6.8 Emergency Vehicles

In a declared emergency, all other mobile equipment will give right of way to emergency vehicles. All emergency vehicle drivers shall obey all road signage.

6.9 Speed Limits & Signage

Speed limit signs shall be adhered to at all times, however, mobile equipment drivers shall always drive to conditions. This means all mobile equipment is to be driven in a safe and sensible manner having due regard for other mobile equipment, the road and weather conditions existing at the time. All mobile equipment must only be operated on a stable and safe surface as is appropriate for the mobile equipment and the work being undertaken.

6.10 Rights of Way

The following rules apply to determine who has the right of way within the QAL plant boundary.

- Pedestrians shall give way to all mobile equipment within operational areas.
- A light or medium vehicle shall give way to another light or medium vehicle in accordance with Queensland traffic rules.
- A light or medium vehicle shall always give way to any piece of heavy machinery equipment regardless of the situation.
- Do not proceed within 10 metres of a forklift engaged in loading or unloading operation.

6.11 Mobile Equipment Risk Assessment

All mobile equipment used for work purposes shall have a risk assessment completed by the Owner prior to initial use. The risk assessment shall:

- Involve operators and maintainers who will use the equipment, and
- Address all aspects of safe operation including handling, driver vision, brake failure, tyre blow out and access and egress for operators and maintainers.

A comprehensive risk analysis shall be conducted to clearly identify the behavioural and conditional factors that impact mobile equipment and driving safely. The risk analysis must cover all aspects of mobile equipment and driving and will have up-to-date action plans in place to manage identified issues.

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Both Light Vehicle Risk Assessment form HSE-028 and Mobile Equipment Risk Assessment form HSE-039 (for all other types of mobile equipment), can be located in Portal – Site Document Access – Forms – Health and Safety – HSE.

The risk assessment shall be reviewed annually by the owner of the equipment.

6.12 Mobile Equipment Operation

6.12.1 Checking the Mobile Equipment Before Operating

A mobile equipment pre-start safety inspection shall occur prior to the first operation of the equipment each day. This inspection must be recorded in the Vehicle Checklist which is kept with the mobile equipment in the section.

Pre Start Vehicle Checklist are available from the warehouse as Material Number 500006188 and as a form S-156 at Portal – Site Document Access – Forms – Health and Safety – Safety.

Pre Start Heavy Machine Checklist are available from the warehouse as Material Number 500021330.

Any identified defects shall be acted on according to their category as defined within the inspection check sheets.

If the pre-start check reveals any category 1 defect as defined on the pre-start checklist form, then the equipment **shall** be removed from service and repairs scheduled. For other category 2 and 3 defects the equipment should be removed from service and repairs scheduled or the defect recorded in the Vehicle Checklist for repair at the next scheduled service.

6.12.2 Parking

Mobile equipment shall always be reversed parked in a designated park where provided. In this instance the mobile equipment may be left secure (locked).

Where a designated park is not provided the mobile equipment is to be parked in a safe location reversed in where possible and the keys remain in the ignition.

Drivers shall ensure that all mobile equipment is parked fundamentally stable so that the mobile equipment does not pose a risk to any person through involuntary or uncontrolled movement while unattended.

When selecting an area to park any mobile equipment, the driver or operator shall consider:

- If the mobile equipment will be parked on sloping or uneven ground (it is preferable to park across the slope)
- If the mobile equipment will be parked adjacent to any drains or gutters
- If the mobile equipment will be parked within a building, such as a warehouse or workshop
- If the mobile equipment is to be parked in such a way that prevents emergency access
- If climatic conditions such as rain, muddy and slippery surfaces, high winds or heavy loads, or other external factors such as a trailer, may have an impact on the driver's ability to safely and securely park the mobile equipment

When parking mobile equipment, the driver or operator shall test for fundamental stability as per the definitions in section 5.0.

If the mobile equipment is fundamentally stable then the driver or operator shall:

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- Engage the parking brake and place the transmission in gear, (“P” for automatics)
- Lower all ground engaging devices such as blades or tines, if applicable

If the mobile equipment is not fundamentally stable then the driver or operator shall:

- Consider moving to another location, or
- Engage the parking brake and place the transmission in gear, (“P” for automatics), **and**
- Use the wheel chocks as per the definitions in section 5.0
- For mobile equipment with ground engaging devices such as blades or tines, these shall be lowered to the ground as an alternative to wheel chocks

The mobile equipment may also be made fundamentally stable by:

- Parking against bump stops in car parks
- Parking one set of wheels in formed wheel ditches where available
- Parking against mounds (berms) where they exist

When connecting or disconnecting a trailer, the driver or operator shall:

- Ensure that the towing vehicle is fundamentally stable
- Ensure that any braking system fitted to the trailer has been engaged and is operating correctly
- Deploy wheel chocks around the trailer wheels in a manner that prevents backwards and forwards movement of the trailer if it cannot be ascertained that the brakes fitted to the trailer will stop the trailer from moving once it is disconnected or if the trailer is not fitted with brakes.

6.12.3 Leaving Mobile Equipment Running

Mobile equipment is not to be left running unless the driver is in the mobile equipment or there is an essential requirement such as a turbo cooling timer or supplying power to a power take off or similar for refueling or servicing purposes or operation of the fire tender. In such cases the mobile equipment must be parked in a fundamentally stable position and the driver in attendance.

6.12.4 Isolation of All Mobile Equipment

All mobile equipment shall be:

- Isolated by removing keys from the ignition or at the designated isolator prior to the under bonnet pre-start inspection being undertaken, and
- Isolated when refueling is carried out.

All mobile equipment shall be isolated when maintenance is being carried out.

- Light vehicles with no battery isolator require no lock out as long as the ignition key is held by the person working on the vehicle.
- All other vehicles shall have the battery isolated and locked as per the Single Point Isolation process described in the Isolation, Tag and Lockout Procedure P314.260.

All mobile equipment shall be isolated when the vehicle is being used as a mobile work station or while loading/unloading. This will avoid other people driving the vehicle away.

6.13 Personal Protective Equipment

All people driving, riding, or operating mobile equipment and mobile powered plant shall comply with P315.102 Protective Equipment – Plant Minimum Requirements. The procedure lists the following:

- Industrial safety helmets are not required to be worn if driving or riding in mobile equipment when protected by a steel or fibreglass roof.

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- Eye protection is not required to be worn if driving or riding inside a fully enclosed cab of mobile equipment when the windows are closed.
- Hearing protection is not required to be worn if driving or riding inside a fully enclosed cab of mobile equipment when the windows are closed.

6.13.1 Quad Bikes

No person shall ride a quad bike *at QAL*.

6.13.2 Wearing of Helmets for Tricycles

The following relates to the wearing of helmets while riding tricycles:

- Roads external to the plant perimeter fence – The rider of a tricycle must wear an approved bicycle helmet securely fitted and fastened on the rider’s head complying with AS 2063 Bicycle Helmets as detailed by Section 256 of the Transport Operations (Road Use Management – Road Rules) Regulation 1999.
- Within the plant – The rider must wear an industrial safety helmet complete with fastened and effective chin strap complying with the requirements of AS 1801 – Occupational Protective Helmets.

6.14 Starting Up and Moving Off Warning Signals

Drivers and operators of all mobile equipment must check that the area required for maneuvering is clear of obstructions and persons prior to moving off.

Drivers must drive forward wherever possible. If this is not possible, the direction of movement should be positively communicated to nearby mobile equipment and persons.

Drivers of medium vehicles and heavy machinery equipment must signal their intentions when starting and moving off. This will be completed by using two-way radio or traffic indicator lights. If two-way radio or indicator lights are not fitted, the operator will use the vehicle horn according to the signals below:

- One (1) blast of the horn, wait 10 seconds, then start up.
- Two (2) blasts of the horn, wait 10 seconds, and then move forward.
- Three (3) blasts of the horn, wait 10 seconds, then reverse.

6.15 Reversing

Drivers shall wherever possible reduce the need to reverse and consider completing a forward loop or make a parallel approach. If this cannot be achieved then;

- Check the path is clear prior to reversing.
- Use a guide or spotter whenever the path is unsighted or you are unsure.
- If a reversing alarm is not fitted, sound the horn three times, wait 10 seconds and then reverse.
- When reversing heavy machinery equipment in process areas, a spotter shall be used.

6.16 Loading Mobile Equipment and Securing Loads

Drivers must ensure they do not exceed the carrying capacity of the vehicle (GMV).

Drivers are responsible for ensuring that their load:

- Is carried in a cargo area and not on a vehicle seat.
- Is positioned in a manner that does not affect the vehicle’s balance or stability, therefore reducing its steering or breaking performance.
- Is properly restrained so that it does not move under all driving conditions, including emergency breaking.

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- Does not become dislodged and fall from the vehicle or trailer.

6.17 Positive Communications

All two-way radio communications between mobile equipment drivers is to be acknowledged and replied to with a clear verbal response. When overtaking is permitted, the communication must identify the mobile equipment involved.

Prior to a light or medium vehicle entering any haul routes at QAL or RDA, a positive two-way radio contact shall be made with the equipment operators, notifying them of the intention to enter the haul route e.g. Bauxite stockpiles.

6.18 Overtaking

Mobile equipment may overtake other mobile equipment when it is safe to do so. Overtaking is not to occur where the visibility of the road ahead or the width of the road is restricted.

6.19 Distance between Mobile Equipment

Drivers are required to maintain a safe distance in accordance with the Queensland Transport Regulation behind another vehicle.

Mobile equipment travelling behind another vehicle shall be able to be viewed by the driver in either the rear view or side view mirrors.

Vehicles engaged in escorting mobile equipment (e.g. cranes) must stay within clear sight of the mobile equipment being escorted at all times.

6.20 Approaching Heavy Machinery Equipment in Stockpile Areas, Landfill and Ash and Red Mud Disposal Dams

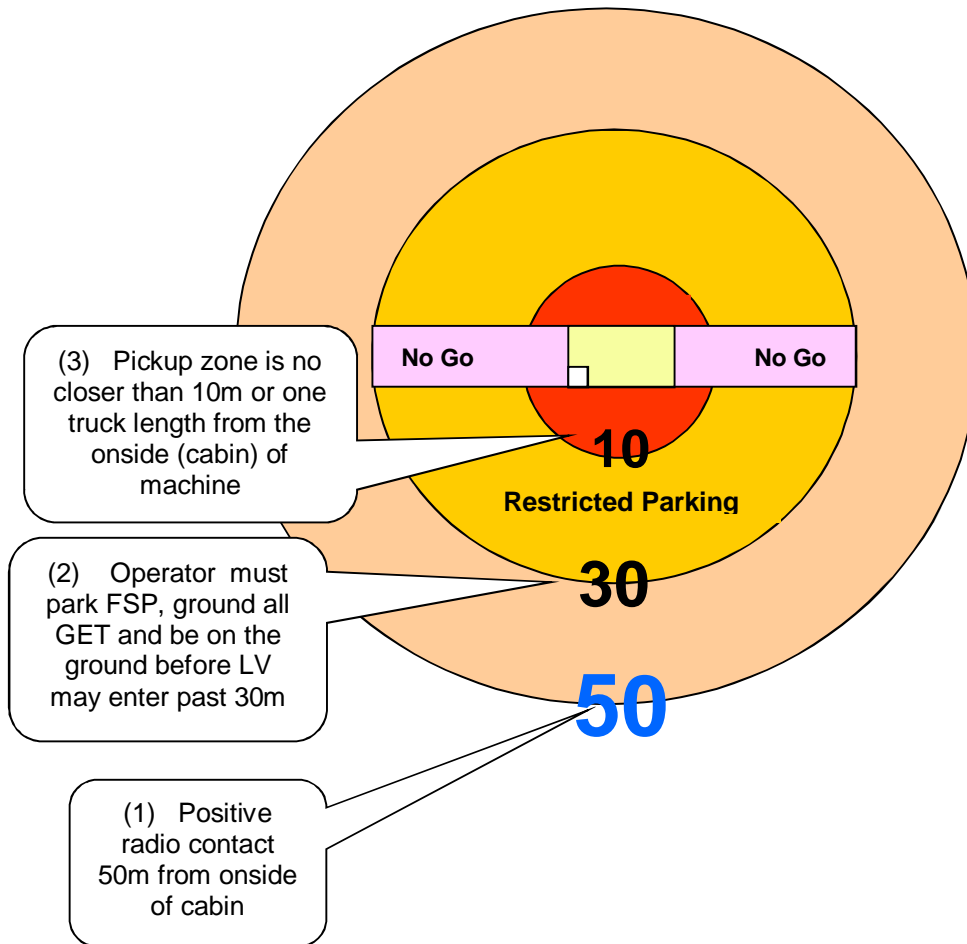
Mobile equipment shall not approach within 50 metres of heavy machinery equipment without first making positive communication; i.e. two-way radio contact with the operator of the heavy machinery equipment being approached.

Light and medium vehicles shall not approach within 30m of heavy machinery equipment until the;

- Light or medium vehicle driver has contacted the heavy machinery operator and communicated the intention to approach inside the 30m zone.
- The operator of the heavy machinery equipment is then to park fundamentally stable (PFS) in a designated safe park area, and lower ground engaging tools (GET) if fitted.
- Make positive contact and grant permission for the light/medium vehicle to enter the 30m zone.
- The operator of the light vehicle (LV) may then approach the heavy machinery equipment and park fundamentally stable in a position which is to the front of the heavy machinery but off to the left hand side.
- The light/medium vehicle shall only park as indicated in the diagram below.

Under no circumstances is the heavy machinery equipment to be moved in any direction whilst the light/ medium vehicle is inside the 30m restricted zone.

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Once the medium/light vehicle has completed its time in the restricted parking area, the light vehicle must leave the restricted area first and make positive contact with the heavy machinery equipment operator after leaving the 50m zone.

The plant road system adjacent to the bauxite and coal stock piles is exempted from this requirement unless the heavy machinery equipment is working on or traversing over the roadway.

Examples where the 50 metre rule may be invoked:-

- Front-End Loader crossing Harbour Road to access the coal stock pile,
- Approaching an excavator at the Red Mud Dam.

Examples where the 50 metre rule would **not** be invoked:-

- Dozer working in the edge of the bauxite stock pile and vehicles travelling within 10 metres on the main road,
- Front-End Loader under escort from Raw Materials to the Waste Transfer Facility.

6.21 U Turns

A Driver is able to execute a U turn once it has been determined safe to do so.

6.22 Alighting from Mobile Equipment

Alighting from moving mobile equipment is strictly prohibited. The person must ensure there is a firm, stable footing on alighting from the vehicle.

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6.23 Access and egress to Mobile Equipment other than the cabin

Access and egress to mobile equipment other than the cabin (e.g., tray back of lifting vehicle) must only be via the manufacturer's designed access/egress points only.

Access/egress points must be clearly labelled as the designate point.

6.24 Equipment Breakdown

Alighting from moving mobile equipment is strictly prohibited. The person must ensure there is a firm, stable footing on alighting from the vehicle.

6.25 Oversize Mobile Equipment

Drivers of all other mobile equipment and pedestrians shall give way to any oversize mobile equipment being escorted by an escort/pilot vehicle.

6.26 Tyre and Rim Safety

Tyres and rims above 610mm in diameter shall not be worked on unless a Tyre and Rim Safety Management plan has been developed. Application of this plan shall be as detailed in Work Instruction W314.701.01.

This plan shall include but not be limited to the following:

- Training and Competency Assessments
- Tyre and Rim Selection
- Tyre and Rim/Wheel Handling Tools and Equipment
- Handling and Storage
- Tyre and Rim/Wheel Mount and dismount
- Installation and removal of Rim/Wheel Assemblies
- Inflation/Deflation of Tyres and Pressure Maintenance
- Operations and Maintenance of Tyres
- Operations and Maintenance of Rims/Wheels
- Storage and Disposal of Scrap Tyres

6.27 Tyre Fires

The primary cause of tyre fires is the application of heat to the tyre or the development of heat within the tyre structure by one or more of a variety of mechanisms such as:

- Electrical earthing through the tyre as a result of lightning strike or power-line contact
- Wheel component heating through misuse of brakes or electric-wheel motor problems
- Internal tyre damage as a result of excessive speed, road camber deficiencies and ply separation.

The same primary causes can result in a violent explosion of the tyre under some circumstances. When encountering tyre fire situations the driver of the mobile equipment shall proceed as follows:

- If possible, the driver is to position the mobile equipment in a manner so that the direction of any blast is toward open space. Park the mobile equipment in a fundamentally stable position.
- The driver is to vacate the area as quickly as possible in a direction moving away from the affected tyre.
- Contact Security on extension 2222 or telephone 4976 2222 who will mobilise the First Response Team.
- Notify the Supervisor of the situation.
- The First Response Team will then direct other personnel to clear the danger area.

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- All personnel shall observe the exclusion zone as deemed by the First Response Team (300m) around the affected machine. Barricading may be placed to prevent inadvertent access.

The quarantine of the machine will last no less than 24 hours which is to be observed by all personnel due to potential for explosion of tyres.

6.28 Contacting Overhead Powerlines or Struck by Lightning

If any mobile equipment comes in contact with powerlines or is struck by lightning, the following must occur:

- The driver must remain in the vehicle.
- Contact Security to mobilise the First Response Team on extension 2222 or telephone 4976 2222.
- The First Response Team will cordon off the area within 300m of the vehicle.
- The vehicle shall be quarantined for at least 24 hours due to the potential for explosion of the tyres.
- Always avoid the sides of the tyres due to the potential for explosion.
- If there is a fire in the vehicle, fire fighting will be carried out using remote control monitors positioned forward or behind the vehicle.
- A competent person should internally inspect all tyres before normal use.

6.29 Traffic Control

Subject to a risk assessment, traffic control personnel may be used in situations such as planned road maintenance, partial road closures, accidents or breakdowns. Traffic controllers shall be certified and manage road and traffic control signage in accordance with AS 1742.

6.30 Vehicle and Heavy Machinery Equipment Recovery

No vehicle or heavy machinery equipment shall be towed unless the equipment used for towing, snigging/pulling is specifically designed and load rated.

All towing equipment shall be stored and maintained by QAL Plant Protection and a register of this equipment will be kept. Towing bars, slings and shackles shall be regularly inspected as per Procedure P314.414. This equipment will be signed out by the end user and returned upon completion of the towing, snigging/pulling activity.

A documented pre-task hazard assessment for towing shall be completed before the task is attempted to identify issues and develop a safe work method. The hazard assessment shall consider:

- People and equipment situated in the "danger zone" if the towing equipment fails. Damper blankets must be used as a control.
- How the towing equipment is attached to the vehicle or heavy machinery equipment. Attachment points shall be specifically designed for the purpose. Towing equipment shall never be attached to the tow ball of a vehicle.
- The weight of the equipment involved. The unladen weight of the towing vehicle shall not be less than the total weight of the towed equipment and any equipment or load on it.
- The towing speed shall be less than 10 kph.

The vehicle or heavy machinery equipment being recovered shall only be towed to ensure it is made safe and is removed from its hazardous situation. Towing shall not be undertaken for transport purposes.

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6.31 Trailer/Towed Equipment

No vehicle will tow equipment unless it is engineered to do so. All trailers must have an appropriate pre-start inspection completed prior to use.

The laden mass of the trailer is not to exceed the towing capacity of the vehicle **and** the towing capacity of the towing apparatus fitted to the vehicle.

When towing a trailer, the hitch must be connected correctly and the safety mechanism must be engaged.

6.32 Loading and Unloading MEWP from Vehicles

When a MEWP is loaded or unloaded from a vehicle the following precautions shall be taken –

- (a) Prevent unauthorised access to the unloading area;
- (b) For boom type MEWP's the boom shall be retracted and lowered as far as practicable without obscuring a clean view of the wheels;
- (c) Where the maximum gradient of loading ramps, tilt trays and slide beds are greater than the rated gradeability of the MEWP, THE MEWP shall be loaded onto the vehicle winch.

6.33 Transportation of Gas Cylinders

Transport of gas cylinders shall be in accordance P314.413 Oxy-Fuel Gas Systems – Safe Use and Maintenance Section 6.5, Transportation of Gas Cylinders. Acetylene cylinders shall be secured in the vertical position at all times during transportation.

6.34 Transportation of Dangerous Goods

All bulk transport of Dangerous and/or Hazardous Goods being carried into QAL must comply with the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG 07). The requirements applicable to the driver of the transport company are:

- The driver must ensure that the transported goods are packaged, marked and the vehicle labelled (placarded) in accordance with the ADG 07; and
- When consigning dangerous goods for transport, they comply to the ADG 07 codes including loading, stowage, ullage, load retention and segregation; and
- The driver has within his vehicle the correct documentation describing the dangerous goods being transported, and appropriate emergency information for those goods; and
- When unloading, receipt and transfer of dangerous goods the driver shall follow the requirement of the ADG 07 especially Chapter 10; and
- The driver shall ensure that the transport of dangerous goods; including the use of vehicles, containers and equipment, and the provision of safety equipment is in accordance with the ADG 07.

6.35 Traffic Management Plan

A separate traffic management plan (Attachment 7.1) shall be created for project work involving the construction of haul roads, large earthworks, dam expansions or significant infrastructure construction where the contractor is nominated as the Principal Contractor.

6.36 Audit

An annual safety element audit of this procedure will be conducted on Contractors and QAL sections.

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6.37Records

Record Type	Responsibility	Location	Minimum Retention Time
CTO Personnel Records	Section Training Officer and/or Contractor Training Officer	SAP Training Records	Indefinite
Mobile equipment risk assessments	Superintendent	P:\general\Safety\Risk Register\Vehicles & Mobile Equipment.	Indefinite
	Contractor Principal	In Contractor's own record system on site	While mobile equipment on site
Mobile equipment pre-starts	Mobile equipment Operator	Every mobile equipment	6 months or until vehicle not in service

7.0 ATTACHMENTS

7.1 Traffic Management Plan Minimum Standard