

Health & Safety

SAFE LOADING & UNLOADING OF POLYETHYLENE PIPE & PRODUCTS

REFERENCE GUIDE

Version 1.0: January 2025



CONTENTS

1. INTRODUCTION	2	6.6 Mixed loads.....	32
2. PERSONAL PROTECTIVE CLOTHING & EQUIPMENT ...	3	6.7 Oversize loads and signs	33
3. LOADING PRODUCT – TRUCK DRIVERS	4	6.7.1 Hazard warning marking and signs	33
3.1 All truck drivers shall have:	4	6.7.2 Piloting	35
3.2 When loading product drivers must ensure the following:.....	4	6.7.3 Hours of darkness	35
3.2.1 Legal weight allowance for truck and trailers.....	6	6.7.4 Lighting	36
3.2.2 Loading product according to its weight.....	7	6.7.5 Excess height	36
3.2.3 Loading product with a truck mounted crane	7	7. LIFTING EQUIPMENT	37
3.2.4 When truck is loaded by a forklift operator	8	7.1 Slings (Straps and Strops)	37
3.3 When driver is securing product.....	8	7.1.1 Synthetic Flat Web Slings (Straps)	37
4. LOADING PRODUCT – FORKLIFT OPERATOR.....	9	7.1.2 Flat Web Slings (Strops)	38
4.1 General forklift safety	9	7.2 Spreader bar	39
4.2 Forklift safety rules.....	9	8. UNLOADING ON-SITE	40
4.3 Forklift safety when loading trucks.....	10	8.1 Prior to leaving the yard.....	40
5. LOAD RESTRAINTS	11	8.2 Journey to the site	40
5.1 Anchorage points.....	11	8.3 Prior to arrival on site:	40
5.2 Methods of Load Securing and Securing equipment	13	8.4 Upon arrival on site.....	41
6. LOAD SECURITY	21	9. SAFETY OUTSIDE THE CAB	42
6.1 Small/medium Coil 40-63mm Ø on Pallets.....	24	10. SUMMARY	44
6.2 Larger Diameter Coils (Truck Racks).....	25	11. REFERENCES	44
6.3 PE Pipe Loaded the Length of the Deck.....	26	12. GLOSSARY OF TERMS	45
6.4 Pallets of Raw Materials	30	13. ASSESSMENT	46
6.5 Farm Boss or Civil Boss	31		

1. Introduction



These guidelines, for the safe loading and unloading of Polyethylene (PE) pipe & product have been developed by a cross functional team of internal and industry experts.

These guidelines are to establish a common standard across the Waters & Farr business. The guidelines will be used to develop the skills, training, and expertise of our Waters & Farr workers and Third Party Carriers throughout New Zealand.

Ultimately, the responsibility for loading the vehicle correctly, including making sure it is secured safely to the minimum requirements, as written in the Official New Zealand Truck Loading Code (Waka Kotahi NZ Transport Agency), rests with the driver.

Disclaimer: These guidelines are designed to provide best practice guidance pertaining to load and restraint information and method for our products. This guide is for use by our contractors, customers and employees. Waters & Farr does not accept any responsibility or liability to any person, whether in contract, equity or tort (including negligence), or under any other legal principle of any kind arising from the use of this guide.

2. Personal Protective Clothing & Equipment

All people entering site must:

- Sign in to the HS-CON01T and notify the yard supervisor immediately
- Complete, or have previously completed, a site-specific induction within the last 12 months. using the HS-CON02F (W&F Version).
- Meet all site PPE and other requirements. Typical PPE includes the following:



Safety Headwear

Lightweight ABS plastic vented AS/NZS 1801:1997 with chin strap, where tasks dictate.



Safety Eyewear

Medium impact, close fitting, wrap around style, anti-fog, anti-scratch (tint or non-tint). Task specific.



Safety Gloves

Maximum grip, protection, dexterity for loading & unloading.



High Visibility Clothing

Hi-Viz Day/Night/TTMC fluorescent yellow, short or long sleeved - full cover for manufacturing sites.



Safety Footwear

Boot
Hi Ankle Lace-ups
or equivalent (full ankle support)



3. Loading Product – Truck Drivers



3.1 All truck drivers shall have:

- A current valid truck driving license relevant to the class of his/her truck.
- A current valid truck mounted crane operating license (if applicable).
- All the PPE/C as per required in section 2.0 Personal Protective Clothing & Equipment.
- Mobile phones for communicating with Despatch and Customers.
- Lifting and securing equipment that is in good working order and shall be fit for purpose, refer to section 5.2 Securing Equipment and section 7.0 Lifting Equipment.
- A current COF and registration for their vehicle. Up to date RUC (road user charges).
- The ability to develop a Lift Plan (risk assessment) for the off-loading procedure if the customer requires this.
- Completed training on loading and unloading products with a truck mounted crane and by a forklift operator and is signed off by the supervisor.

3.2 When loading product drivers must ensure the following:

- Any damaged product shall not be loaded and is to be reported to Dispatch.
- The area in which product is being loaded is clear of bystanders (5m exclusion zone) and clear of any moving trucks and forklifts (which includes the product being lifted).
- The deck is free of hazards that can damage product e.g. chocks, other objects etc.
- All tasks shall be completed from the ground. Only when there is no other possible way of performing the task from the ground is working on the deck permitted. A Job Safety Environmental Analysis (JSEA) is required for any work to be undertaken on the deck, of a truck. Access and fall protection shall be considered as part of a risk assessment prior to accessing the deck, if there is no fall protection used then another form of access must be used this may include a man cage or other suitable safe access available onsite, i.e a safe working platform or similar.
- There are no overhead power lines within 5m (when there is moisture in the air i.e. drizzle, rain, fog the distance shall be doubled).
- All tags shall be checked for Working Load Limit (WLL) prior to lifting product, refer to section 5.2 Securing Equipment and section 7.0 Lifting Equipment.
- That they maintain visual and audible contact with the forklift operator at all times.

Our Life Saving Rules



Suspended loads



Drugs & alcohol



Plant & machinery



Working at heights



Exclusion zone



Mobile plant
& equipment



Secure loads



Energy isolation

Your Life Saving Choices



Eyes on hands



Eyes on path



Body aware



Assess the area



Safe position

3.2.1 Legal weight allowance for truck and trailers

- The content below applies for both a truck and trailer.
- The combined weight of a truck and trailer must not exceed its legal restriction.
- All truck drivers must ensure the truck and trailer does not exceed its legal weight allowance.
- To ensure the driver has the correct load weight they must comply with the vehicles max weight limit along with their truck and trailer Road User Charges (RUC) weight.

Certificate of Loading GVM (Gross Vehicle Mass)



- Tare weight - Weight of truck with truck deck and truck mounted crane)
- In this example, it is stated that the GVM is 34,000 kgs (34 Tonne), this means the truck with its load has the capacity to weigh a max total of 34 Tonne.

RUC (Road User Charge)

The RUC weight is what has been paid for, which determines the additional load weight the vehicle can legally take. The driver must ensure that the load they are carrying is within the legal allowance on the RUC weight.



- In this example, this truck with its load must not exceed the LEGAL weight of 28 Tonne.

To determine the vehicle is within its legal load weight, the driver needs to follow the formula below.

28.00T (RUC Weight)
~~-18.52T (Tare weight)~~
 9.48T

(Due to the round off, the total weight of the load on the truck must be no more than 9.5 Tonne)

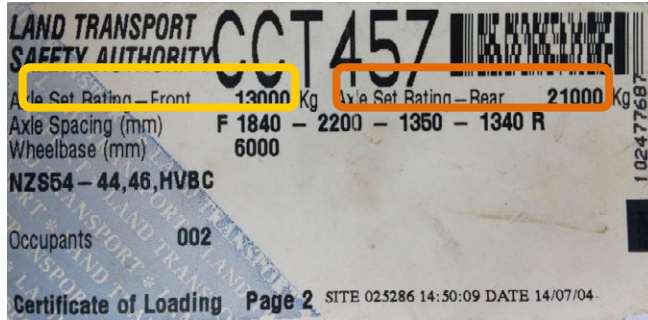
Subtract the RUC weight stated on the label from the Tare weight (weight of truck only with a full tank of fuel, truck's deck and truck mounted crane)

3.2.2 Loading product according to its weight

- The below content applies for both a truck and a trailer.

Certificate of Loading- Axle Set Rating

The "axle set rating": for front and rear are shown on the label below.



□ Front axle set rating = 13,000 kg

□ Rear axle set rating = 21,000 kg

The driver must not allow the axle ratings to be exceeded while loading product.

Summary

- Place your heaviest product first on either the front or rear axle.
- Then lighter products are to be placed on the deck as per picking list.

NOTE: It is important to note that 15 – 22m lengths of pipe affect weight distribution. Due to the overhang beyond the rear of the truck or trailer deck there will be a greater weight over the rear axle. This weight must be calculated and compared to the rear axle rating, with the weight not to exceed the rear axle rating.

3.2.3 Loading product with a truck mounted crane



- All lifting equipment is to be checked for compliance prior to being used, refer to section 7.0 Lifting Equipment
- All lifting equipment is to be attached to the product from the ground before loading.
- Stabilising legs shall be fully extended with rubber or wooden mats for stability.
- Truck mounted crane with a wireless controller is to be operated from the ground and from a safe distance (5m) of all moving product.
- Lifting equipment must not be overloaded; refer to section 7.0 Lifting Equipment

3.2.4 When truck is loaded by a forklift operator

- Driver and all pedestrians must be at least 5m clear of forklifts 7 tonne or greater.
- Driver and all pedestrians must be at least 3m clear of 5 tonne or lower, these exclusion zones includes the loads being carried, i.e 5m for 7t and 3m for below plus the load being carried.
- Driver must be clearly visible to the forklift operator at all times.
- Driver is not allowed on the truck deck while forklift is loading / unloading. If the driver needs to access the truck deck during loading operation, the forklift operator must cease loading until driver is all clear (off the deck and 5m away from forklift and load) and a risk assessment and JSEA must be completed.
- The JSEA must be signed off by the site manager or his logistics manager and be written for each occasion where deck assess is required, all other options must be exhausted first.



Check the picking list off with the forklift operator to determine what products need to be loaded and in what order.

Communication between the forklift operator and the driver must be maintained throughout the entire loading process to ensure it is loaded safely.

3.3 When driver is securing product

- When a load binder (tie-down) is required to be thrown to the other side of the truck, the driver must check visually for other workers and call out to check for clearance, exclusion zone rules shall apply. **The load binder must be rolled up, so the securing hook is not being thrown over the load.**
- Ensure correct PPE is **worn at all times.**
- All securing methods are to be completed from the ground after the forklift operator has finished loading product.
- Take care of hands when placing wooden scallops.



4. Loading Product – Forklift Operator

- The forklift is a key product handling device in loading and unloading operations.
- It provides an indispensable and versatile tool for moving product from the factory to the yard, around the yard, stacking/unstacking and for truck loading/unloading.
- It is critical that care is taken when moving, stacking, loading and unloading PE products, i.e. speed, pedestrians other vehicles and to avoid product damage.
- All safety precautions as per formal training & licensing requirements shall be followed.
- A forklift is not dangerous by itself. Only incorrect operation, poor maintenance and lack of care will introduce hazards into its operation.

4.1 General forklift safety

The forklift is most effective and safe when operated properly. This takes into account:

- Forklift maintenance and regular inspections.
- Only site manager approved, licensed and F endorsed forklift operators may operate a forklift.
- Attachments are certified, fit for purpose and maintained.
- Types of loads to be carried, weight distribution and load stability.
- Load manipulation, stacking and unstacking.
- Yard surface conditions.
- Narrow and restricted areas
- Site traffic and the presence of pedestrians.

4.2 Forklift safety rules

Visitors, Truck Drivers and Contractors are not to use forklifts at any Waters and Farr site.

- Only authorised, licensed and F endorsed Waters & Farr forklift operators with a valid OSH Forklift Certification may operate a forklift.
- Check your surroundings before moving in any direction.
- Always observe the Maximum Safe Lifting Capacity of any hoist you are using.
- Forklifts shall be driven slowly and with caution, with good visibility in the direction of travel.
- At all times, be aware of pedestrians and other vehicular traffic.
- Do not carry passengers on the forklift.
- Check that the forks or prongs are the correct length for the job. Use extension forks if necessary.
- Be aware of proximity behind or to the sides of other stacks of products when performing lifts or placing products.
- When lifting long or large diameter products, be aware of the load centre distance from the mast face and the effect this has on the rated hoist capacity. **The spreader bar must be used for loads over 6m in length.**
- Never lift a load which results in the back wheels rising off the ground. Never put extra weights behind a forklift.
- Stop the forklift before raising or lowering a load to the stack height or truck level.
- Carry out lifting or side shift movements slowly and carefully to avoid impact to trucks or people and damage to product.
- Ensure that the load is secure on the truck, before slowly removing the forks.
- Never place any part of your body on, near or under a load when suspended.
- Never approach a reversing forklift.



Mobile plant & equipment



Exclusion zone



Assess the area



Safe position

4.3 Forklift safety when loading trucks



- The forklift operator shall never leave the controls of the forklift while it is running, and the load is suspended.
- This includes when the forklift operator is attempting to assist the truck driver to place dunnage. Should something fail i.e. brake failure, a worker is at risk of being seriously injured. It is critical that verbal and eye contact is maintained between the forklift operator and truck driver at all times.
- Drivers and other workers shall never stand in areas which could be potential crush zones, for example between forks of the hoist and the deck of the truck. Exclusion zones are a Life Saving Rule and apply at all times.
- Driver shall keep at least 5m distance away from vehicle / product being loaded by the forklift operator.

The driver shall maintain safe distance when directing the forklift operator. Communication and eye contact are critical.



Assess the area



Safe position



Mobile plant & equipment



Exclusion zone

SAFE POSITION

- Placing yourself in a safe place, outside the line of fire.
- Avoiding being struck, overcome by fumes, sprayed, fallen on, run over, crushed or hit by a flying object.

ASSESS THE AREA

- Continually assessing the area for hazards and for suitable and safe access.
- Could I be run over, could I collide with someone or an object, could I get stuck, should I be accessing the area?

MOBILE PLANT & EQUIPMENT

- We will only operate mobile plant and equipment if trained and authorised to do so.
- We will never operate mobile plant unless we have full visibility of directional movements.
- We will always adhere to the site traffic management plan.
- We will always carry out pre-start checks on our equipment before operating.

EXCLUSION ZONE

- We will always set up work exclusion zones to keep ourselves and others safe.
- We will stop work immediately if someone enters an exclusion zone.
- We will ensure exclusion areas are clearly demarcated by signage, cones, barriers, surface marking.

5. Load Restraints

- The products and goods you are transporting on your truck, as well as any equipment and tools, must be properly loaded and restrained, and be within maximum permitted dimension and weight limitations. Failure to safely restrain your load may result in a fine of up to \$2,000 and a licence may be disqualified for a period as the court thinks fit. The maximum fine for a company (PCBU) is \$10,000.
- The public's safety must not be at risk by your load. The load you are carrying must be protected so it arrives in the best possible condition. Drivers of all trucks whether large or small are legally responsible for ensuring their loads and any equipment they are carrying are properly restrained.
- You should also check your load after 25km; at each rest stop after that; when you add or remove items; if you've had to brake hard or swerve; if you hear an unusual sound from the load (e.g. flapping from covers, or banging like the load is moving in corners); if the truck suddenly feels different under braking; and before unloading, to ensure that it won't shift as soon as you release any restraints.

5.1 Anchorage points

When the driver is securing a load to the anchorage points, the weight rating for each anchorage point must be followed. The rating is shown on a plate with a certificate No. located on the deck of the truck

Example:

The certification plate must be inspected by the driver for:

Expiry date, wear, clear and legible words, nothing covered or paint over, missing anchor point ratings, damage or corrosion.

If any of the above is not legible, it will result in an infringement.

RATINGS

If the anchorage point exceeds the weight of the product being tied down, then the securement is safe. To ensure the correct securing equipment is used, the driver is to follow the points below.

Example 1 (From the certificate plate above)



Product weight = 1.9T
Chain rating = 4.0T
2x 3.5T slots (Anchorage Point) = 7T
Chain ratchet = 3.8T

In this example the chain is able to restrain 1.9T of product. Therefore the chain slots (Anchorage Point) are able to hold the product and chain in place.

Example 2 (From the certificate plate above)



Product weight = 1.25T
Strap rating = 2.5T
2x rope rail droppers (Anchorage Point) = 5T

In this example the strap is able to restrain 1.25T of product. Therefore, the rope rail droppers (Anchorage Point) are able to hold the product and strap in place.

Summary:

- Driver must check the certificate plate located on the truck deck.
- Driver must ensure the restraining equipment is able to restrain the product in place and is within the anchorage point rating.
- Driver must ensure the load restraint formulas are followed, refer to section 6.0 Load Security.
- Driver must ensure the anchorage point is not damaged.

Watson Mechanical Limited		
Mobile: 021 587 194, Email: nick@watsonmechanical.co.nz		
Certificate N°	228089	Eng. ID. NBW
VIN	JA L0XHS1747000093	
Load Anchorage Points	N°	Rating
rope rail span	28	1000 Kg
rope rail droppers	25	2500 Kg
rope slots	30	3000 Kg
rope loops	40	4000 Kg

STRAPS



5.2 Methods of Load Securing and Securing equipment

There are several ways for securing a load onto a truck deck. A range of different securing equipment such as straps, chains, chocks, ratchets, and dunnage are used to secure a load. The guidelines and restrictions below must be followed to ensure product is secured safely for transport.

Comes in various colours. The strap outlined above is to be used for general strapping of a wide range of loads.

Features:

- Straps are soft and wide therefore less likely to scratch smooth surfaces.
- Able to mould around the load.
- Stretch under the load.
- Are easily damaged.
- Are less likely to crush fragile objects.
- Sleeves can be attached to protect product edges and to reduce wear and tear on straps.
- Straps (50mm wide) (Minimum Requirement)
- Load Capacity (LC) is 2,500kg.

■ The driver must inspect the straps for:

- Manufacturer's name displayed
- Manufacturer's rating displayed
- Cut webbing or snagging
- Heat or chemical damage
- Holes
- Tears
- Frays
- Broken stitching
- Worn and damaged seams
- Damaged hooks and ratchet mechanism

Safety:

- Load Capacity must not be exceeded.
- Load Capacity and warning instructions must be checked prior to use.
- When the driver comes across any of the above inspection defects, they must tag the straps out of service and give to supervisor to have them replaced.
- When straps are required to be thrown to the other side of the deck or product, they must call out and visually check for clearance.
- The driver must wear the correct PPE when using straps, refer to section 2.0 Personal Protective Clothing & Equipment.

WOODEN SCALLOPS



Scallops purpose is to secure large diameter and length pipe across the deck. The correct distancing between scallops will ensure that the pipe is well supported. Downward restraint shall be lined up with the scallop position along the deck.

Features:

- Provide stability for longer length and large diameter pipe
- Provides additional friction to the deck of the truck to prevent lateral movement
- Scallops are spread the length of the deck to provide support across the length of the pipe

Safety:

Do not set the scallops out whilst the forklift is operating. Scallops shall be positioned on the deck well in advance of any forklift and product movement. Scallops shall be restrained to prevent unintentional movements.

- Scallops must be restrained to prevent unwanted movement.

The driver must inspect the wooden scallops for:

- Deformation in shape
- Any cracks or splits
- Dampness of the scallops which may cause product to slip
- Any protruding nails that may damage product

Maintenance:

If there are any visible cracks or splits in the wooden scallops they shall be removed from service and thrown out.

TRUCK RACKS



The purpose of truck racks is to secure large diameter coils on the truck deck. The Large Coils are to be strapped to the truck rack and the truck rack strapped to the truck deck.

Features:

- Provide stability for large diameter coils
- Prevents lateral and longitudinal movement

Safety:

Coils are to be mounted and strapped to the Truck Rack whilst on the ground. The Truck Rack (and coils) are then to be lifted by Forklift onto the truck deck using long fork extensions.

The driver must inspect the Truck Racks for:

- Deformation in shape
- Any cracks or splits in welds
- Condition of Location Pins and associated locating holes

Maintenance:

If any cracks or splits are found in the welds on the Truck Rack, or if there is deformation of rack or damage to location pins the Truck Rack is to be removed from service and repaired.

WOODEN CRATES



The purpose of the wooden crating is to secure both small and large pipe together. Lengths of pipe 6m and longer are crated. Maintaining the correct distancing between crating will ensure that the pipe is well supported along its length. Downward restraint shall be lined up with the crate position along the deck.

Features:

- Provide stability for longer length and large diameter pipe
- Provides additional friction to the deck of the truck to prevent lateral and longitudinal movement.
- Supports the pipe along the length of the truck deck
- Contain the lengths of pipe for ease of movement and carriage.

Safety:

Driver must be well clear with any loading or unloading of crated pipe, sudden movements or crate failure should always be expected.

The driver shall inspect wooden crates for:

- Deformation in shape
- Any cracks or splits or damage wood
- Any protruding nails that may damage product

Maintenance:

If there are any visible damage such as cracks or splits in the wooden crates they shall be removed and replaced.

LARGE COIL DRUMS



The purpose of Coil Drums is to secure large diameter coils on the truck deck and provide ease of deployment of coils on site. The large coils are to be secured by strapping to the Coil Drum on the ground to prevent coils unravelling. The Coil Drum is then to be lifted onto the truck deck by forklift using the two dedicated lifting rails at the base only

Features:

- Provide stability for large diameter coils
- Provide a means of containment and deployment for large diameter coils
- Prevents lateral and longitudinal movement

Safety:

Driver must be well clear when loading or unloading Coil Drums. Under no circumstances should the coil strapping be removed, or the Coil Drum be released. Both actions can result in the stored energy being released and uncontrolled uncoiling potentially causing serious injury or death.

The driver shall inspect Coil Drums for:

- Deformation of metal work
- Any cracks or splits in welds

Maintenance:

If any cracks or splits are found in the welds on the Coil Drum, or if there is deformation of the metal work then Coil Drum is to be removed from service and repaired/ replaced.

STRAPPED BUNDLES



The purpose of Bundles is to provide stability and contain the pipes for ease of movement and carriage. The strapping used for the bundles is PE plastic material which is secured with metal buckles. Bundles are either placed on dunnage on the truck deck and strapped or are placed on top of crates or pallets and strapped.

Features:

- Provide stability for longer length and large diameter pipe
- Contain the lengths of pipe for ease of movement and carriage

Safety:

Driver must be well clear with any loading or unloading of bundled pipe, sudden movements or bundle strapping or buckle failure should always be expected.

The driver shall inspect Strapped Bundles for:

- Splits, cuts and damage to strapping

Maintenance:

If there is any visible damage such as cuts or splits or other damage the strapping must be removed and replaced, or new strapping placed next to the damaged strapping.

BELLY STRAPPED COILS



The purpose of belly strapping coils is to provide ease of movement and carriage as well as stability across the truck deck. Belly strapping also prevents coils from falling from the truck when the truck curtains are opened.

Features:

- Provide stability for coils across truck deck
- Hold the coils together for ease of movement and carriage

Safety:

Driver must be well clear with any loading or unloading of crated pipe, sudden movements or crate failure should always be expected.

The driver shall inspect strapping for:

- Manufacturer's name displayed
- Manufacturer's rating displayed
- Cut webbing or snagging
- Heat or chemical damage
- Holes
- Tears
- Frays
- Broken stitching
- Worn and damaged seams
- Damaged hooks and ratchet mechanism

Maintenance:

- Load Capacity must not be exceeded.
- Load Capacity and warning instructions must be checked prior to use.
- When the driver comes across any of the above inspection defects, they must tag the straps out of service and give to supervisor to have them replaced.
- When straps are required to be thrown to the other side of the deck or product, they must call out and visually check for clearance.
- The driver must wear the correct PPE when using straps, refer to section 2.0 *Personal Protective Clothing & Equipment*.

LARGE COILS SUSPENDED FROM CEILING BY STRAPPING



The purpose of suspending large coils from the ceiling of a truck or trailer is to provide a safe means of securing the coils and to prevent them falling when the curtain is opened.

Features:

- Provides a safe means of securing large coils
- Prevents large coils falling when truck curtains are opened.

Safety:

- A safety cage must be used by the truck driver to thread the strap onto the ceiling rail. Forklift must be stationary with brakes, harness and lanyard applied while supporting the large coils as the strapping is secured.

The driver shall inspect strapping for:

- Manufacturer's name displayed
- Manufacturer's rating displayed
- Cut webbing or snagging
- Heat or chemical damage
- Holes
- Tears
- Frays
- Broken stitching
- Worn and damaged seams
- Damaged hooks and ratchet mechanism

Maintenance:

- Load Capacity must not be exceeded.
- Load Capacity and warning instructions must be checked prior to use.
- When the driver comes across any of the above inspection defects, they must tag the straps out of service and give to supervisor to have them replaced.
- When straps are required to be thrown to the other side of the deck or product, they must call out and visually check for clearance.
- The driver must wear the correct PPE when using straps, refer to section 2.0 Personal Protective Clothing & Equipment.

6. Load Security

Forces (payload forces) act on a load when it is moving. Loads need to be restrained to manage these forces. Load restraints must be strong enough to:

- Support the full weight of the load in a forward direction.
- Support the half weight of the load in a sideways direction.
- Support half the weight of the load in a (backwards) direction.
- Support some of the weight of the load in a vertical direction.

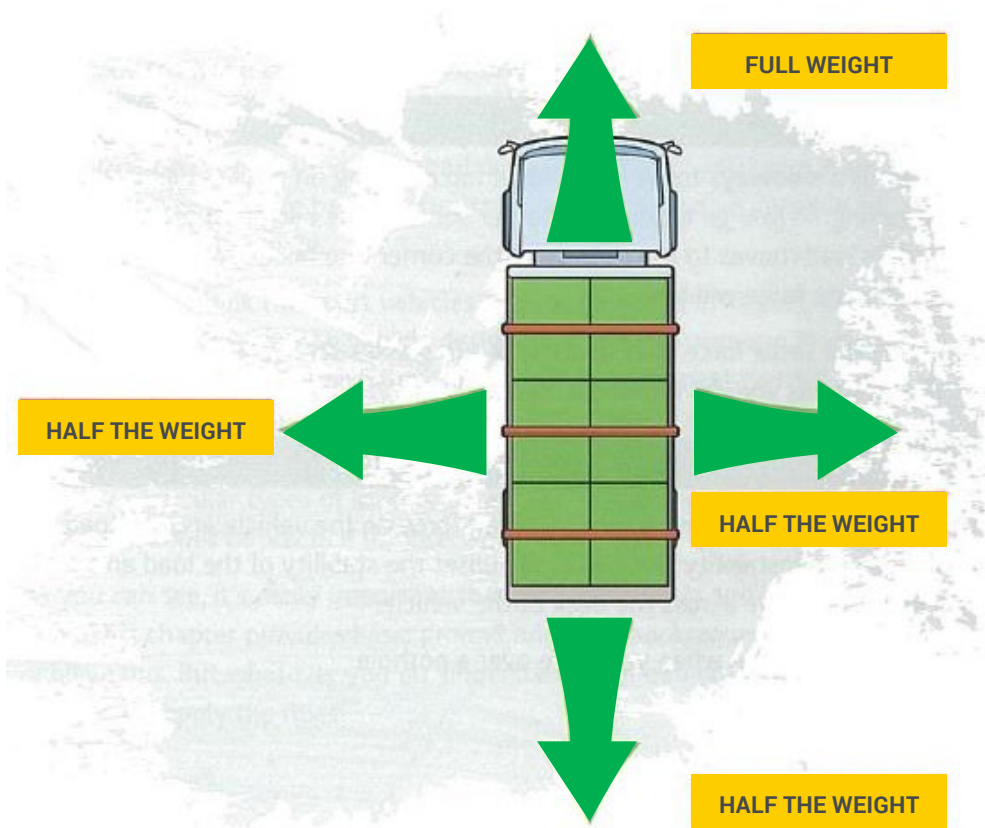


FIG. 1 Heavy rigid vehicle stability and dynamics: an introduction programme for drivers of heavy motor vehicles (Waka Kotahi NZ Transport Agency)

The load restraint formulas must be followed as below

A. Where not loaded against a headboard.



Restraints must have a combined rated strength of at least twice the weight of the load.

Example a)

If the above load weighed 5 Tonnes:

$2 \times W$ (weight) = Amount (tonnes) of load restraint required

2×5 Tonnes = 10 Tonne of load restraint required

B. Where loaded against a headboard, so that the top products have at least

150mm

supported.



Restraints must have a combined rated strength of at least the weight of the load.

Example b)

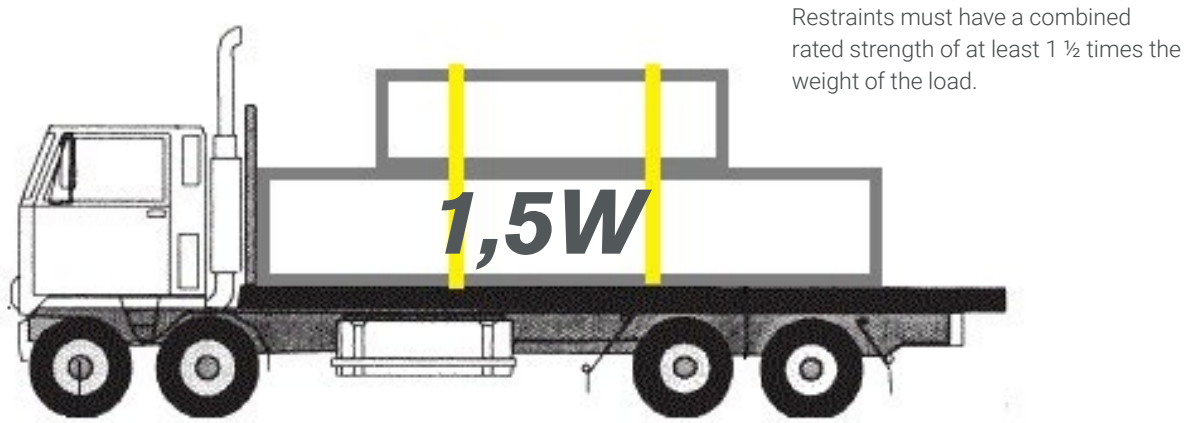
If the above load weighed 5 Tonnes:

W (Weight) = Amount (tonnes) of load restraint required

$5T = 5$ Tonnes of load restraint required

By using the headboard as part of the load restraint you are only required to equal the weight of the load.

C. Where lower products are supported by a headboard, but upper products are not supported by headboard by at least 150mm.



Example c)

If the above load weighed 5 Tonnes:

$1 \frac{1}{2} \times W$ (Weight) = Amount (tonnes) of load restraint required $1 \frac{1}{2} \times 5$ Tonnes = 7.5 Tonnes of load restraint required

Again, the headboard provides partial load restraint for the load.

**THE DRIVER MUST ENSURE THAT THEY ARE FAMILIAR WITH THE PRODUCT THEY ARE SECURING.
IF THE DRIVER IS UNSURE ON HOW THEY SHOULD SECURE IT, THEY MUST ASK THEIR SUPERVISOR AND/OR
MANAGER ON THE DETAILS OF THE CORRECT AND SAFE SECURING PROCESS.**

FOR EVERY LOAD AND RESTRAINT PROCESS THE DRIVER MUST CONSIDER THE THREE KEY REQUIREMENTS BELOW:

1. Friction:

The use of wooden scallops and crates provide the necessary friction, protection and containment of PE pipe. PE pipe should never rest directly on a truck deck.

2. Protection:

Sleeves on straps protect restraints from excessive wear and tear.

3. Direct restraint:

Restrains should always line up with wooden scallops or crates, always check the integrity of your restraints before every use. Always ensure restraints are correctly secured to anchorage points on the truck.

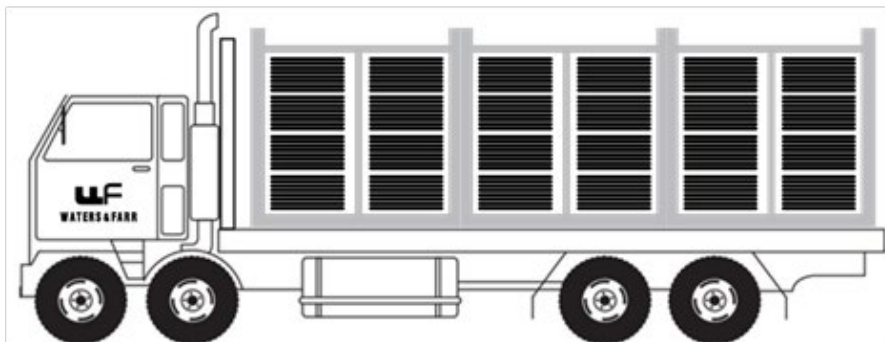
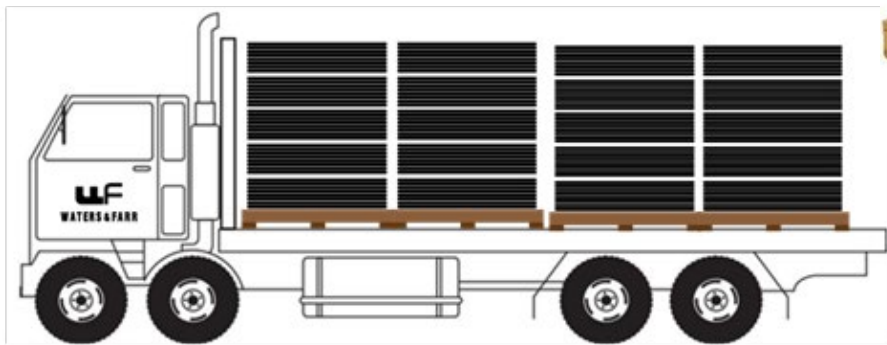
6.1 Small/medium Coil 40-63mm Ø on Pallets

Coils are individually strapped and laid on top of each other. There can be up to 4-5 coils on a pallet. The coil and pallet shall then be shrink-wrapped to secure them to the pallet (as can be seen below).



Smaller diameter coils may also be stacked inside a cage for transport (above right).

On flatdeck trucks/ trailers the pallets or cages of coils are secured using two straps across the width of the product securing to opposite anchorage points on the truck. Ideally the two straps are crossed over diagonally on top of the pallet or cage.



On curtain sider trucks/ trailers coils can be loaded vertically on the truck deck and secured between the curtains and/ or between the roof support beams. Larger 50mm and 63mm diameter coils can be belly strapped as in Section 5.2 Methods of Load Securing and Securing Equipment.

6.2 Larger Diameter Coils (Truck Racks)

- Larger diameter coils can be loaded onto either curtain sider trucks or on flatdecks.
- Large coils loaded onto curtain sider trucks should be belly strapped on opposing sides of the coils or suspended from the ceiling rail as in Section 5.2 Methods of Load Securing and Securing Equipment.
- Large coils loaded onto flatdeck trucks are to be mounted on Truck Racks prior to Truck Rack being placed on truck. The coils are then secured to the frame using straps across either each side of the coils or the top of the coils. When the Truck Rack is placed onto the truck deck it is secured by strapping across the base of the frame in two places across the coils.



6.3 PE Pipe Loaded the Length of the Deck



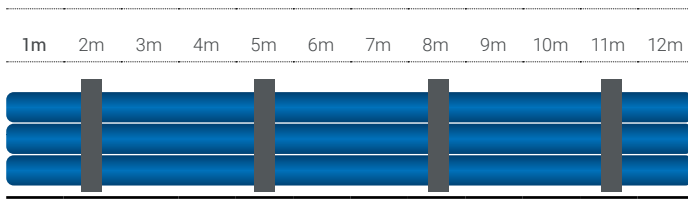
Layering of pipes – pipes shall not be loaded in a greater number of layers than shown below:

Nominal Pipe Diameter	Number of Layers
90mm and 125mm	6
110mm	7
140mm and 160mm	5
180mm – 225m	4
250mm	3
280mm – 315mm	4
355mm	6
400mm – 500mm	5
560mm	4
630mm - 710mm	3
800mm – 900mm	3
above 1050mm	2

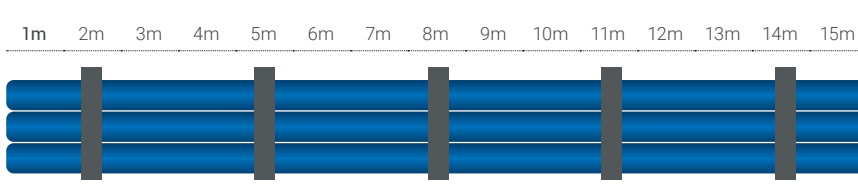
This guideline covers all pipe lengths from 12 to 22 metres. Generally, all packs of pipe in this type of load are the same size however the principals remain the same if there are multiple variations of packs or diameters in the load.

- 12 to 15 metre pipe can be carried on either curtain sider or flatdeck trucks.
When 12 to 15m is loaded on curtain sider trucks/ trailers care must be taken to ensure that pipe does not go above the rubber lip at the top of the truck/ trailer. Pipe loaded to a height above this lip introduces an unnecessary safety/ load stability risk when unloading as the load can catch on the lip causing the forklift load to become unstable and /or fall. This also applies to other product such as Bosspipe which is lighter and therefore an even greater risk.
- Truck Drivers must be aware of any single lengths or bundles of pipe being placed above crates of 12m to 22m pipe that will be out of the line of sight of staff offloading at the receiving site. There have been occurrences of unsighted product above crates falling when unloaded so the truck driver must be aware of such loads and advise the receiving yard staff.
- Pipe above 12m should always be carrier using a Combi lift.
- Drivers can add additional strapping if they prefer but the strapping requirements below cannot be substituted.
- Alternate the side of the load the buckle is positioned on to prevent all of the restraint being pulled from one side of the truck as well as ensuring all strapping is vertical

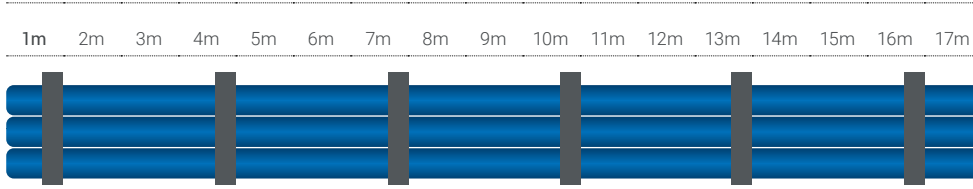
12m Pipe - Requires 4 straps per layer - First strap at 1.5 metres with 3 metres gaps. 3 Belly Straps.



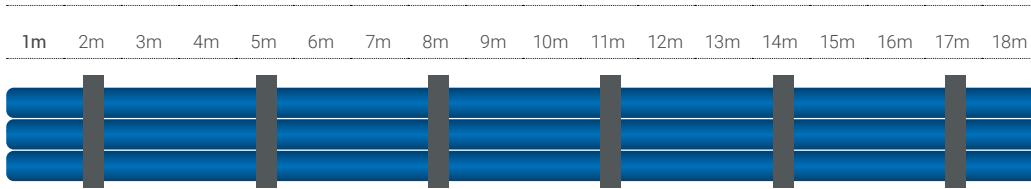
15m Pipe - Requires 5 straps per layer - First strap at 1.5 metres with 3 metres gaps. 3 Belly Straps.



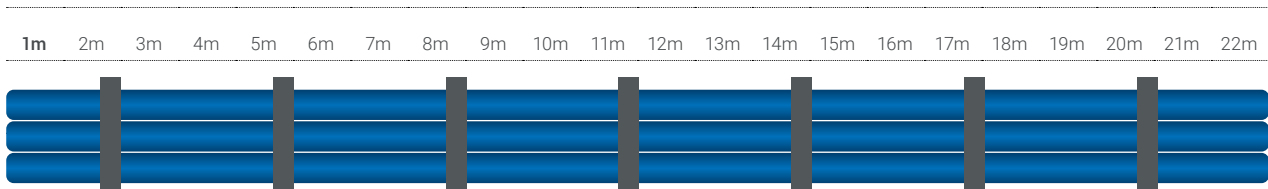
17m Pipe - Requires 6 straps per layer - First strap at 1.0 metres with 3 metres gaps. 4 Belly Straps.



18m Pipe - Requires 6 straps per layer - First strap at 1.5 metres with 3 metres gaps. 4 Belly Straps.

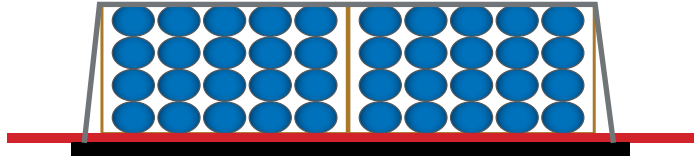


22m Pipe - Requires 7 straps per layer - First strap at 2.0 metres with 3 metres gaps. 5 Belly Straps.

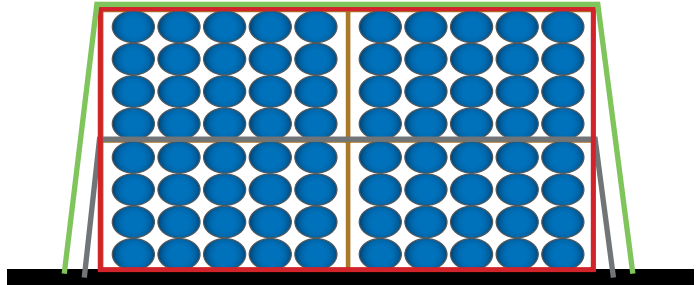


The number of belly straps required for 12m pipe is at the truck drivers discretion. A minimum of 2 belly straps is required for 18m pipe and a minimum of 3 belly straps is required for 22m pipe.

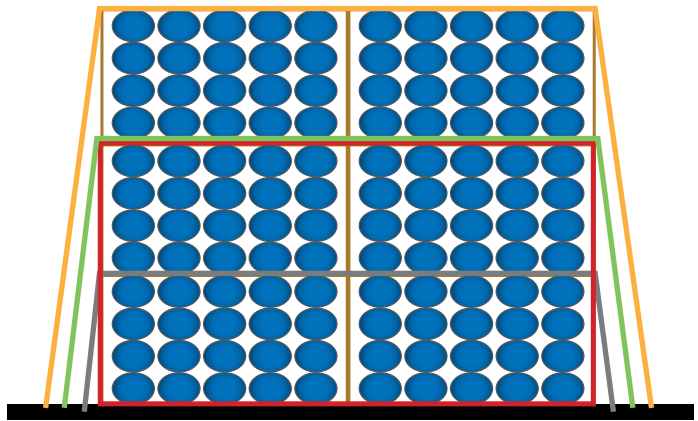
Lay straps on the deck - these are to belly the first 4 packs as one unit (Red)
Load 2 packs and apply straps to the packs (grey)



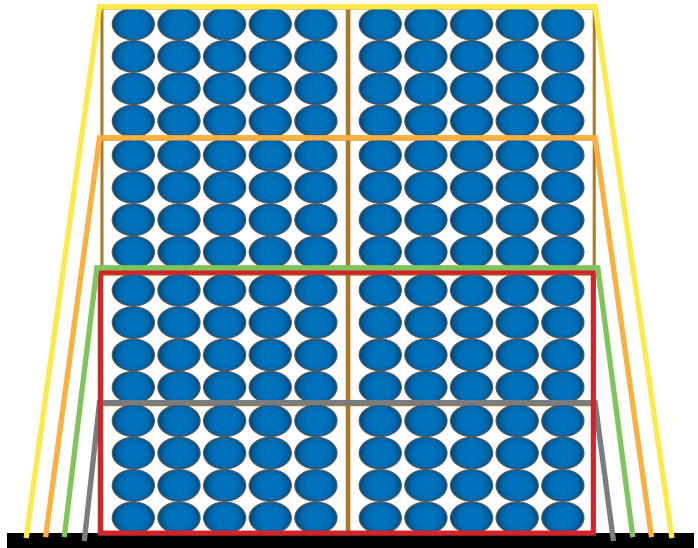
Load 2 packs on top of the first 2 packs
Belly strap the 4 packs (Red)
Apply straps to the 4 packs (Green)



Load 2 packs on top of the first 4 packs
Apply straps to the 6 packs (Brown)



If 8 packs are being loaded apply straps to the 8 packs (Yellow)



The pipes will be unloaded using a HIAB and need to be pre-stropped.

Position the stropps as per the table below to ensure the stropps are 7 metres apart to suit spreader bar usage. The table below is for guidance only, truck drivers should use their discretion when positioning stropps.

Pipe Length	Position of strop from each end (metres)
12m	2.5
15m	4
17m	5
18m	5.5
19m	6
20m	6.5
21m	7
22m	7.5



It is critical that the stropps are positioned at the same distance from each end so the pipe is flat when lifted during unloading.

Pre Stropping (when required as per the dispatch note instructions)



Loop Strop around pack outside the 2nd outer most timber frame with the tail hanging on the outside of the pack.

Ensure the loop is in the centre of the pack.

Fasten the strap to the timber frame with Iplex tape as shown (this method works in the rain). This keeps the loop in the centre of the pack during transportation and keeps the pack level during unloading.



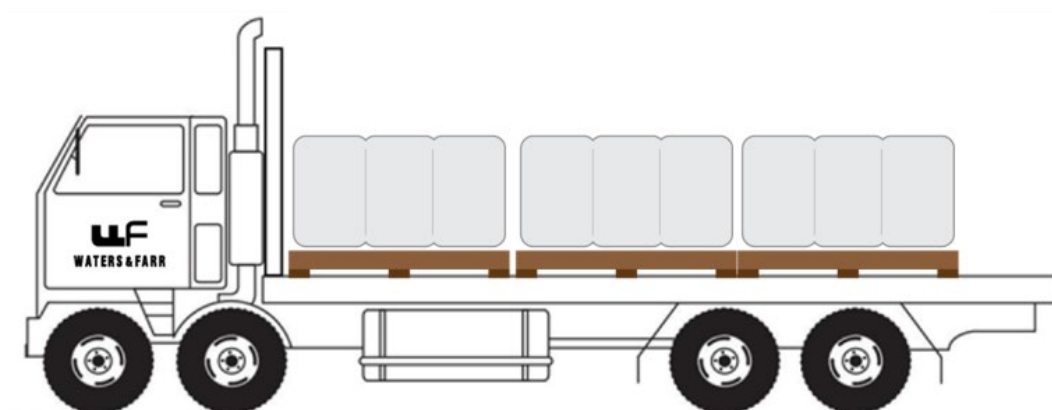
Secure the ends of all stropps on all packs so the ends are no higher than the base pack. This will allow the ends to be accessed easily from the ground and removes the need for the driver to climb the load.

6.4 Pallets of Raw Materials

Raw materials such as resin granules shall be loaded bulk bags (IBC) and onto a pallet. Pallets shall not be double stacked when being transported. Where possible raw materials should be transported on curtain side trucks/ trailers to protect against adverse weather (any moisture ingress will render the raw material unusable).



Pallet in good condition and may be used

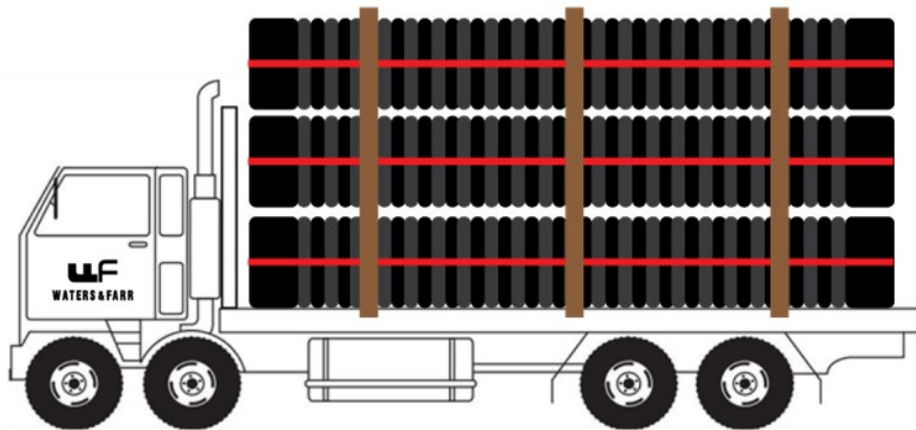


6.5 Farm Boss or Civil Boss

This section covers large, corrugated Farm or Civil Boss products. Varying diameters of Farm and Civil boss is stored and transported in wooden crates and lies flat on the deck of a truck. The methodology of securing lengths of PE pipe applies the same to Farm and Civil Boss.

In some situations a pallet may be used as a base for single lengths or bundles of Bosspipe. In these instances if a pallet is used it must be in good condition.

Where Bosspipe is carried on a curtain sider truck or trailer care must be taken not to load higher than the rubber lip at the top of the curtain side. Loading above this point can result in unstable or falling load when unloading.



6.6 Mixed loads



- This section shall be followed alongside sections 6.1, 6.2, 6.3, 6.4.
- The types of loads a driver will transport the most are mixed loads. Mixed loads consist of different products.
- When the driver has mixed product to load they shall ensure the following:
 - Product shall be tied down to the deck with fit for purpose and good condition tie-downs refer to section 5.2 Securing Equipment
 - The load restraint formulas shall be followed, refer to diagram in section 6.0
 - The load anchorage cert. shall be followed to ensure the rating is not exceeded, refer to section 5.1 Anchorage Point
 - Corner boards are to be used effectively to prevent damage to product and securing equipment.
 - Product is secured as compactly as possible to increase friction of the load.
 - Damaged product shall not be loaded and shall be reported to Despatch immediately
 - Products shall be secured to pallets with at least two tie downs prior to loading onto truck deck.

6.7 Oversize loads and signs

The trucks used to freight Waters & Farr products are within the Category 1 requirements for oversize loads.

Category 1 requirements: Refer to Over-dimension Vehicles and Loads, Factsheet 53A, a New Zealand Transport Agency document <https://www.nzta.govt.nz/assets/resources/factsheets/53/docs/53-overdimension.pdf>

6.7.1 Hazard warning marking and signs

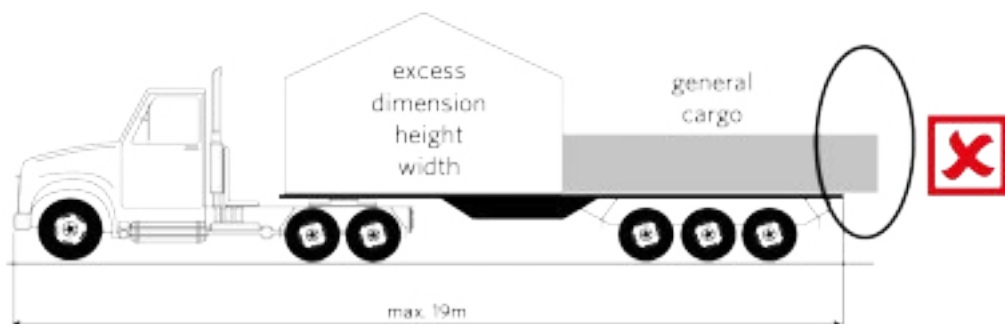
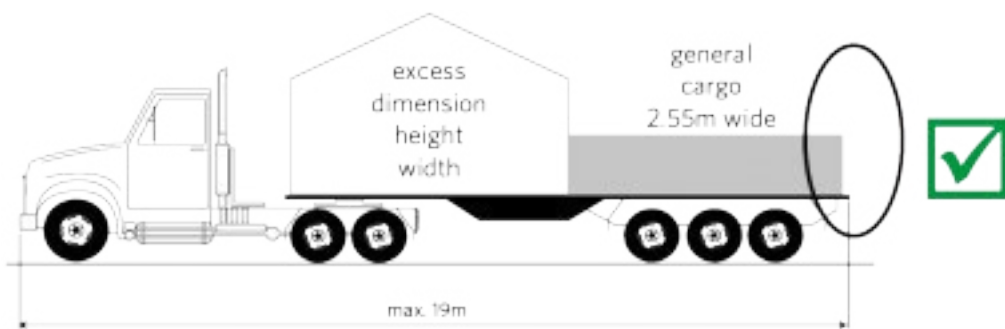
Fluorescent yellow flags (at least 400mm long and 300mm wide) must be attached to indicate the:

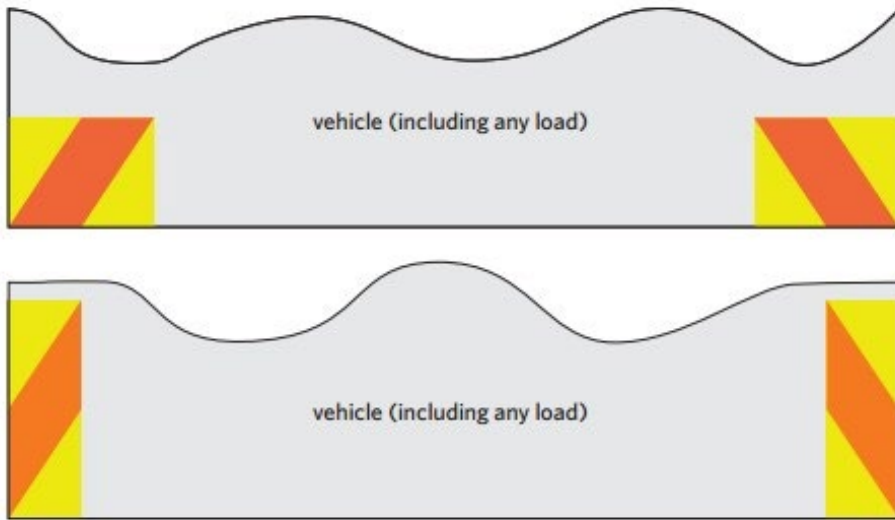
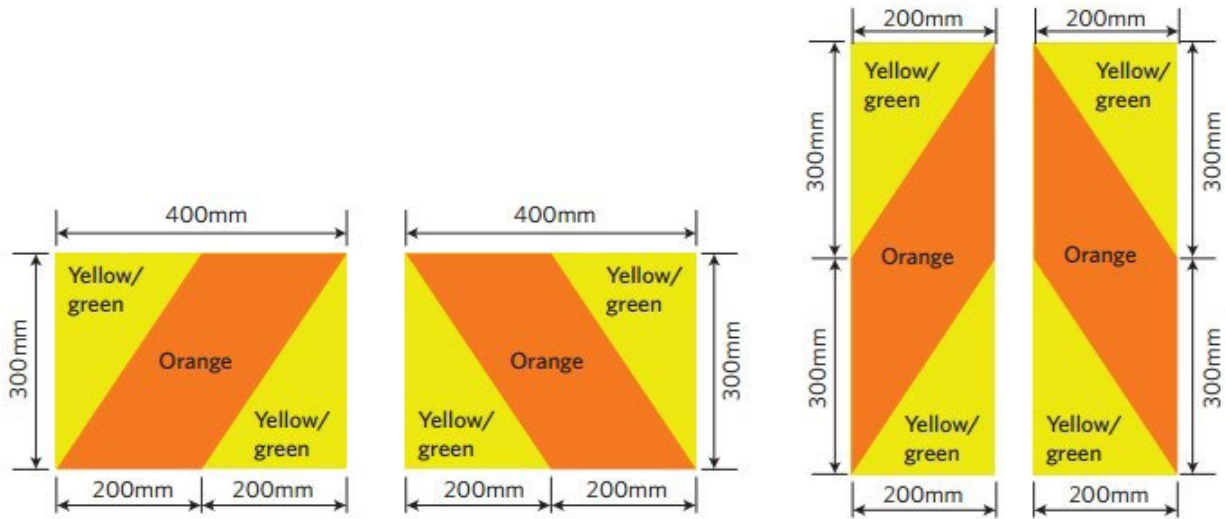
- Excess width of the truck or load at its front and rear
- Front of the load (if it has excess front overhang)
- Rear of the load (if it has excess rear overhang)
- Rear of the load (if it has excess length)

You may use retro-reflective hazard panel's coloured yellow green with an orange diagonal stripe instead of flags. If you're travelling during the hours of darkness, the flags must be replaced with retro-reflective yellow-green hazard panels with an orange diagonal stripe.

The panels must:

- Comply with AS/NZ 1906.1:1993 Retro reflective materials and devices for road traffic control purposes, Part 1: Retro reflective materials.
- Consist of retro-reflective material coloured yellow-green with either a 200mm or 300mm wide diagonal orange stripe.
- Have the illustrated dimensions and orientation.
- Be frangible (fragile; easily broken if hit by an object, e.g. a cyclist).





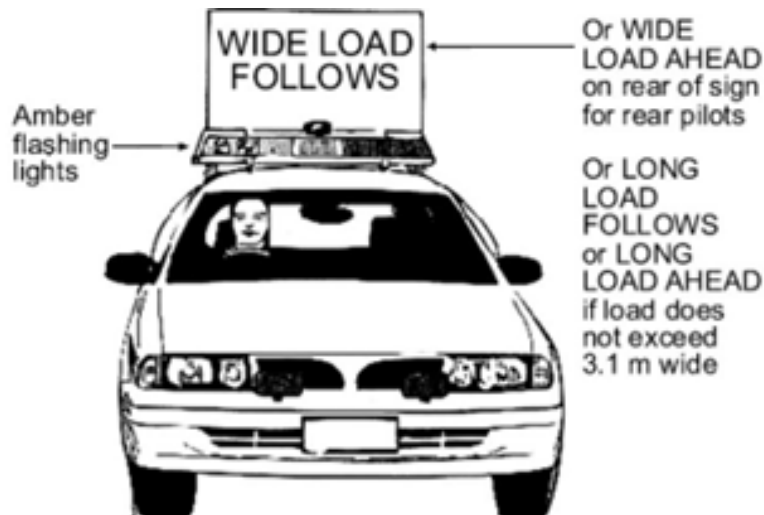
If the truck is more than 3.1 metres wide, Oversize signs must be displayed at the front and rear.



You must not display Oversize signs unless required to do so by the Truck Dimensions and Mass Rule.

6.7.2 Piloting

- If the width of the truck or load exceeds 3.1 metres and the truck travels during the hours of darkness, the over-dimension truck must be piloted by at least one NZTA-approved Class 2 pilot.
- If the width of the truck or load exceeds 3.1 metres and the truck travels at a speed over 40km/h, the over-dimension truck must be piloted by at least one NZTA-approved Class 2 pilot.



6.7.3 Hours of darkness

Restricted travel times Category 1 over-dimension vehicles must not travel:

- Between 0700 hours and 0900 hours, or 1600 hours and 1800 hours, on Monday to Friday inclusive, in any city* area.
- Between 1000 hours and 1300 hours, or 1600 hours and 1900 hours, on Saturday or Sunday at times when there are unusually heavy traffic volumes.

NOTE: City is defined as the urban areas of Auckland (between Albany and Drury), Christchurch, Dunedin, Hamilton, Hastings, Invercargill, Napier, Nelson, New Plymouth, Palmerston North, Tauranga, Wanganui, Wellington (including all areas south of McKays Crossing on State Highway 1 and Te Marua on State Highway 2) and Whangarei.

The restricted travel times don't apply to a motor vehicle whose dimensions, although exceeding the maximum dimensions allowed for a standard vehicle, don't project outside the lane in which the vehicle is travelling, and the vehicle (including its load) has been certified (under NZTA approval) as meeting the road space requirements of a maximum size standard vehicle.

The restricted travel times also do not apply to vehicles designed to be operated in connection directly with the operation or management of a farm.

6.7.4 Lighting

Lighting during the hours of darkness

When travelling during the hours of darkness, all over-dimension vehicles must be clearly visible (in clear weather) from at least 200 metres away. Over-dimension vehicles, except a standard motor vehicle carrying a load up to 2.7m wide that is not over length, must display an amber beacon.

If a load is being carried, except for a standard motor vehicle carrying a load up to 2.7 metres wide that is not over length, there must be steady white or amber lights at the front and steady red or amber lights at the rear. These lights must have an area of at least 50 square centimetres and be positioned so approaching traffic can determine the size of the load and safely get past it.

If the load overhangs the deck of the vehicle sideways, these lights must be spaced approximately 1 metre apart across the lowest part of the load and at the widest parts of the load. Over-dimension vehicles, except a standard motor vehicle carrying a load up to 2.7 metres wide that is not over length, must have side marker lamps spaced approximately 3 metres apart – amber colour to the front and red to the rear.

6.7.5 Excess height

What are the over-dimension operating requirements for excess height?

If your vehicle or load exceeds 4.25 metres in height, you must comply with these conditions:

Height (m) operating conditions 4.25–5.0 metres

- Need written permission from owner of any overhead obstruction that the vehicle can't clear safely.
- Need written approval from a relevant rail service operator, if the vehicle travels over a railway level crossing that doesn't cross a state highway, and the vehicle exceeds the height shown on an electrified railway safe height sign.

For loads over 4.8 metres, must use a vehicle with a deck height less than 1.3 metres above the road.

NOTE: In Wellington any loads 4.6 metres or higher which need to travel under a trolley bus wire will require an escort. Please see the Wellington City Council website www.wellington.govt.nz.

Over 5 – 6.5 metres

- Need to meet all of the above operating conditions.
- Need a permit from OPIA*. A vehicle with a deck height less than 1.3 metres above the road must be used.
- Need written permission from the owner of overhead wires or cables that the vehicle travels under.
- Over 6.5 metres.
- Need written approval from the NZTA. Apply to OPIA.

REFERENCE

- NZ Transport, 2013, Vehicle dimensions and mass- guide to factsheet 13 series, retrieved from <https://www.nzta.govt.nz/assets/resources/factsheets/13a/docs/13a-heavy-rigid.pdf>
- NZ Transport, 2013, Over dimension vehicles and loads, retrieved from <https://www.nzta.govt.nz/assets/resources/factsheets/53/docs/53-overdimension.pdf>

7. Lifting Equipment

When preparing to lift a load, the appropriate equipment must be selected to do the job safely. This section describes the purpose of all lifting equipment required to load and unload PE product using a truck mounted crane.

7.1 Slings (Straps and Strops)

Slings are a type of lifting equipment, which is used to lift product with a truck mounted crane. The two types of slings that drivers are to use are Synthetic Flat Web Slings (Straps) and Strap Slings. Both are described below:

7.1.1 Synthetic Flat Web Slings (Straps)



Manufacturers name

Straps are to be used for lifting large loads. Because of their soft material they do not damage product.

Care instructions shall be read and signed off by the driver using the strap. These care instructions are written on the rear of the strap tag.

7.1.2 Flat Web Slings (Strops)

Features:

- There are two main materials for web slings, nylon and polyester
- The lifting strops that Waters & Farr contractor truck drivers use are polyester.
- Polyester is more resistance to acids, and they stretch only half as much as nylon slings.
- Web slings are soft and wide therefore less likely to scratch polished surfaces.
- Mould around the load
- Stretch under the load
- Are less likely to crush fragile objects.

The driver must inspect the strops for:

Manufacturer's name displayed

- Manufacturer's rating displayed
- Cut webbing or snagging
- Heat or chemical damage
- Holes, tears, frays, broken stitching
- Worn and damaged eyes and seams
- Twists and kinks in webbing when lifting must be avoided
- Dryness

Safety:

- Never exceed the working load limit.
- Never allow webbing to rub against sharp surfaces.
- Reject any strops if damaged webbing is evident. The driver must tag the strop out of service and give to supervisor to have it replaced (Contract businesses must follow their own rules for rejected strops).
- Foreign material such as sand and grit can permanently damage the webbing fibres. Clean sling with warm water and mild detergent.
- When straps are required to be thrown to the other side of the deck or product, they must call out and visually check for clearance.
- The driver must wear the correct PPE when using strops, refer to section 2.0 Personal Protective Clothing & Equipment.



7.2 Spreader bar

- A spreader bar is used to distribute the load along its length and ensures the product is well balanced during loading and unloading. This is why pipes of any diameter over 6 metres length must be lifted using the spreader bar.
- The condition of the spreader bar needs to be checked prior to use and be compatible with the forklift using it.

Features:

- The spreader bar has tines at intervals along its width to evenly distribute the load.
- Spreader bars reduce the risk of loads tipping to one side as well as sliding, or bending.

When using the spreader bar, the forklift driver must ensure the following:

The SWL must not be exceeded under any circumstance, i.e. The weight of the spreader bar must be taken into account when lifting a load as it may derate the forklift capacity, therefore if the spreader bar is 500kg and the load needed to be carried is 3,000kg the total weight would be 3,500kgs and may exceed the capacity of the forklift.

That the forklift tines and backrest are located correctly in the spreader bar and that the locating pins are locked in place before use.

The forklift driver must inspect the spreader bar for:

- Manufacturer's name displayed
- Manufacturer's rating displayed
- A valid service tag which should be checked every time it is used i.e. expiry date, SWL
- Check if the bar has locating pins fitted and that they are in good working condition

When the forklift driver comes across any of the above inspection defects, they must tag the spreader bar out of service and report to supervisor to have it repaired or replaced.

Maintenance:

Apply CRC or an alternative lubricant to the touch points and links at the end of every week.



8. Unloading On-Site

Truck driver must ensure the following:

8.1 Prior to leaving the yard

- Product must be tied down to the deck with fit for purpose and good condition tie-downs refer to section 5.2 Securing equipment .
- The driver must complete a full walk around the truck and check the integrity of each restraint.
- The load restraint formulas are to be followed, refer to diagram in section 6.0. Product is secured as compactly as possible to increase friction of the load.
- Loose items must be clear from the truck deck and in the tool boxes.
- Where oversize load signs and hazard panels are required it must be displayed refer to section 6.6 Oversize loads and signs.

8.2 Journey to the site

- Obey all road rules whilst in transit.
- Check your load after you have travelled 25km and periodically thereafter, such as at rest stops.
- Check your load every time you remove or add items to your load during your journey.
- Check your load after emergency braking or an excessively sharp or violent maneuver.

8.3 Prior to arrival on site:

- There must be enough space for the truck to safely enter and exit the location, if unsure, ask Despatch to check the site on google maps or physically check prior to delivery i.e. take the service Ute to the site, take empty truck to site and perform an entry and exit.
- Clear instruction is received for whom to meet on arrival, i.e. call the site supervisor/ customer. Where on site the product is to be placed.
- Driver is informed of site hazards and receives a site induction.
- Driver must ensure PPE is worn according to site requirements.
- Driver must follow the site rules/ requirements when instructed. If unsure contact your supervisor.
- Determine if traffic management will be provided.



In all instances if the driver has been asked to perform an unsafe loading or unloading task, they must not perform the task. Contact/ inform your supervisor immediately!

Driver is to receive picking slip from Despatch and consult despatchers for relevant information.

8.4 Arrival on site



Consultation with site supervisor is made upon arrival. Ensure that:

- You are presentable to meet our customer, includes correct uniform, PPE.
- Park in a safe and legal location, do not obstruct traffic or pedestrian ways (activate hazards and or safety beacons)
- Locate the Site Supervisor/Customer or key contact as per delivery instructions.
- Request an induction if first time onsite and finer details re where the delivery needs to get to.
- Walk the access route and inspect the site proposed for delivery (seek alternative methods of delivery if ground stability or other environmental conditions pose too great a risk)
- Through the site Supervisor determine how the lift will be performed (as written into delivery instructions)
- Complete a lift plan and risk assessment for the unloading method (if performing).

9. Safety outside the cab

Driving a truck comes with risks, but in fact, many drivers who are killed or injured are not even in the cab when an accident occurs. One of the most dangerous times for drivers is during the loading and unloading process. Consider each of the following:

Expansion and contraction

- Polyethylene (PE) expands and contracts with temperature fluctuations.
- As PE pipe cools it contracts and this will result in tension being reduced on load bindings. These must be checked prior to departure and periodically during the journey.
- Heat causes PE pipe to expand. If one side of the pipe is facing the sun it will heat up, the other side will be in the shade and therefore cooler. This means the expansion will occur faster on the hotter side causing the pipe to bow. This has been identified as a key cause of serious accidents as it results in unexpected movement. Please understand there is no such thing as unexpected movement. Because of its chemical composition, Polyethylene Pipe will always move if unrestrained.
- Never leave unrestrained pipe on a truck or on the ground in stacked form, it will move. Chocking is not an adequate means of restraining PE Pipe.

Undoing or releasing restraints

Often it is only the restraints holding the goods in place. Check the items haven't moved. PE pipe can contract and bow if exposed to excessive heat and sunlight. Don't remove restraints from suspect items until they have been supported. Always look up and be prepared to move quickly.

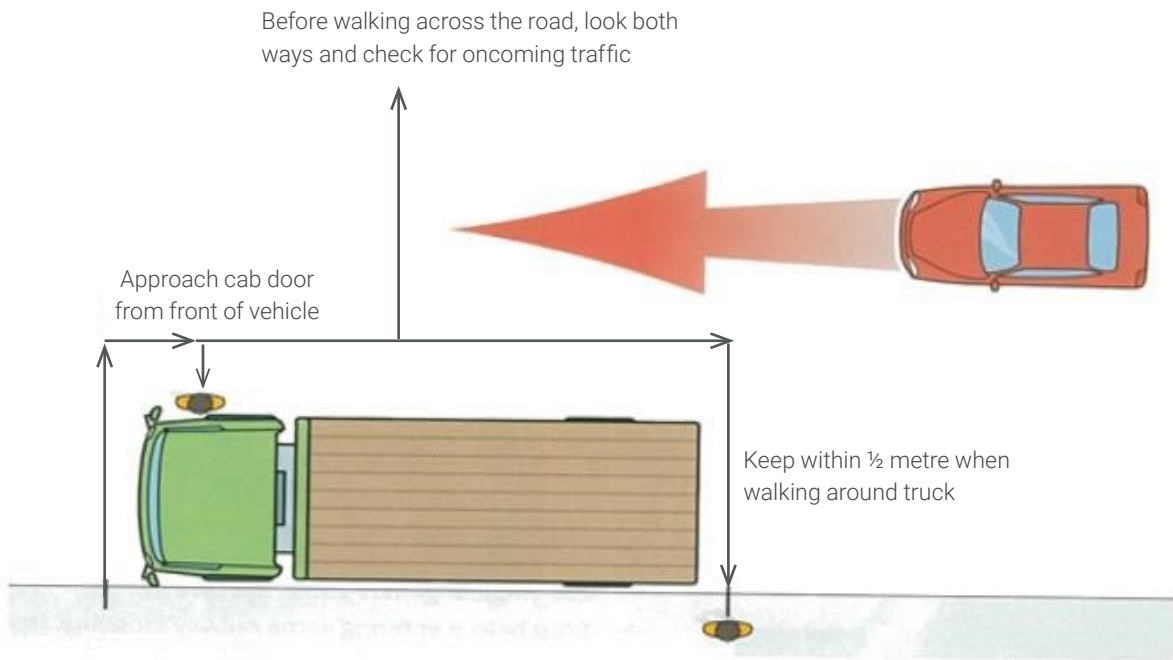
Loading or unloading your truck

Always remain in the view of the operators of any machinery. Never position yourself on the opposite side of the truck from that being loaded or unloaded. One mistake by the forklift operator and suddenly the load is on top of you, or you can be crushed between forklift and truck, so observe exclusion zones.

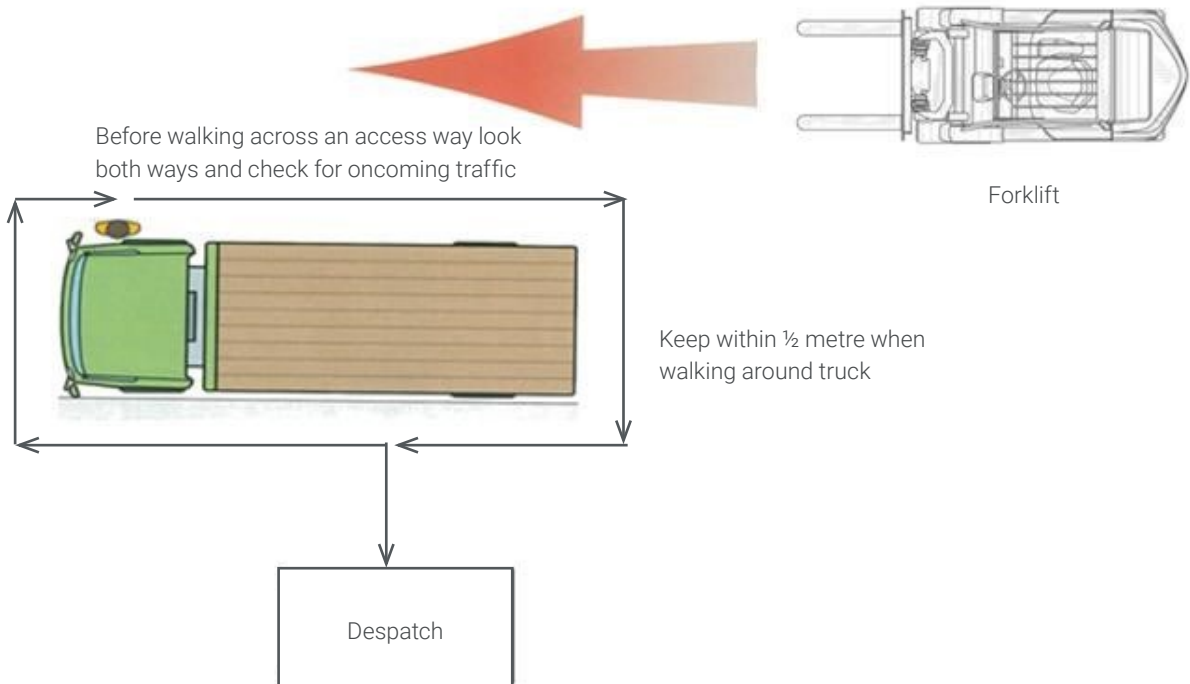
Safe zones

A safe or exclusion zone is an area within the unloading zone that is free of pipe and traffic movement (a place where people can stand out of harm's way).

Everyone within the unloading zone must be standing in the safe zone before any pipe is removed from the truck. If forklifts or telehandlers are used the pipes are not restrained by lifting slings and can slide off either side of the fork tines. If this happens the pipe will tip, will fall, and will bounce unpredictably in any direction. Thought must be given to this when establishing a safe zone.



When truck is parked on a roadside



10. Summary

Drivers have been informed of the personal protective equipment requirements as in section 2.0 Personal Protective Equipment and every driver shall have and shall use the stated equipment for the required purposes. When the driver is required to access and work from the truck deck, he/she shall be provided with fall protection in the form of a platform that runs along the deck a smaller platform or mancage with safety harness and lanyard.

The risks and hazards have been identified for the loading and unloading processes in sections 3.0 to 4.0 and section 9.0. Each section has covered safe practises that a driver shall follow in order to perform the task safely.

During loading and unloading the driver shall have a safe distance of 5m from moving mobile plant and product movements and shall perform all tasks from the ground. Only when there is no other possible way of performing the task, is working on the deck permitted, after a risk assessment or JSEA is completed.

Restraining requirements have been identified and examples of product being restrained have been put in place to ensure drivers restrain their load securely and correctly. The restraint formulas shall be followed, refer to diagram in section 6.0 Load Security.

Lifting and securing equipment has been identified and explained for its purpose. Information on how to maintain and what defects to check for is also shown in detailed diagrams in sections 5.2 and 7.2.

Oversize loads and signage regulations have been detailed from NZTA in section 6.6 Oversize loads and signs. These legal requirements shall be complied with for safety of the driver and others on the road.

When a driver is required to access the truck deck to work, he/she shall use the equipment authorised by Waters & Farr management, after completing a JSEA or risk assessment.

When unloading off-site driver shall ensure that the speed limit of the site is followed and where no speed limit is set a speed of 10km/hr is kept. Drive to the conditions of the site e.g. when site is busy you may need to drive less than 10km/hr. The driver shall notify the site personnel on arrival and seek briefing on hazards and risks on site. Section 9.0 Unloading off-site shall be adhered to at all times.

The driver shall not jump from cabs or truck decks, they shall maintain 3 points of contact when accessing and egressing the cab and truck deck. Section 10.0 Safety outside of the cab shall be adhered to at all times.

Driver shall ensure there is a 5m clearance where there are overhead power lines. Section 11.0 shall be adhered to at all times.

11. References

- NZ Transport, Vehicle Dimensions and Mass, retrieved from <http://www.nzta.govt.nz/resources/factsheets/13/vehicle-dimensions-and-mass.html>
- NZ Transport, Over Dimension Vehicle and Loads, retrieved from <http://www.nzta.govt.nz/resources/factsheets/53/index.html>
- NZ Transport, Truck Loading Code, retrieved from <http://www.nzta.govt.nz/resources/roadcode/truck-loading-code/index.htmlloading-code/index.html>
- NZ Transport, 2013, Vehicle dimensions and mass- guide to factsheet 13 series, retrieved from <https://www.nzta.govt.nz/assets/resources/factsheets/13/docs/13-vehicle-dimensions-and-mass.pdf>
- NZ Transport, 2013, Over-dimension vehicles and loads, retrieved from <https://www.nzta.govt.nz/assets/resources/factsheets/53/docs/53-overdimension.pdf>

12. Glossary of Terms

Word	Definition
Bluntness	An object without sharpness or clearness of edge or point
Bystander	A person who is not authorised to be present in an area while the task is being performed
Comply	To act in accordance with another's rule or regulation
Corrosion	A slow deterioration by being eaten or worn away
Deadweight	The load or weight of a structure without any additions such as oil hoses
Defect	An imperfection, failing, or blemish
Deformed	Having the form or shape changed
Disengagement	To release from something
Durability	Something that is capable of withstanding wear and tear or decay
Electrocuted	To harm with electricity
Eliminate	To get rid of or remove a hazard
Emphasis	Something that has a special importance or significance
Friction	The rubbing of one object or surface against another.
Guideline	A guideline is a principle put forward to set standards or determine a course of action
Hazard	A hazard is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.
Immobilise	To hold something and stop it from movement
Isolate	To create a barrier around hazard such as machine guarding or fencing
Minimise	To reduce a hazard, for example personal protective equipment
Orientation	The direction followed in the course of a trend, movement, or development.
Permit	Permission to perform a task
Protruding	An object extending out above or beyond a surface or boundary
Synthetic	An object that is not made from natural substances
Tare Weight (Shown on Certificate of Loading)	Weight of truck only with a full tank of fuel, trucks deck and truck mounted crane (without a load i.e. pipe product)
Tare Weight (Manufacturer)	An empty truck including chassis and cab (without deck and truck mounted crane and/or extra additions)
Tension	The act or process of stretching something tight

Abbreviations	
DN	Diameter nominal- The round off of a pipe diameter
e.g.	Means "for example"
GCM	Gross Combined Mass
GVM	Gross Vehicle Mass
HVBC	Heavy Vehicle Brake Code
HV	Heavy Vehicle
i.e.	Means "in other words"
Kg	Kilograms
Km/hr	Kilometres per hour
LC	Load Capacity"
m	Metres
mm	Millimetres

Abbreviations	
PPE	Personal Protective Equipment
RUC	Road User Charge
SWL	Safe Working Load
T	Tonne
W	Weight
WLL	Working Load Limit

13. Assessment

Anybody that completes Loading and Unloading tasks needs to complete this assessment.

Date : _____
 Name : _____
 Manager Name : _____

Signature

Role : Yardman Despatch
 Truck Operator Forklift Operator
 Other

- ✓ I have read and understood the contents of the Waters and Farr Loading and Unloading Guidelines.
- ✓ I agree to abide by all Waters and Farr safety rules and follow policies, practices and procedures established to maintain health and safety.
- ✓ I agree to conform to all the requirements under the Health and Safety at Work Act 2015, legislations, regulations, standards, and Worksafe NZ approved codes of practice and the Official New Zealand Truck Loading code.

QUESTIONNAIRE INSTRUCTIONS.

All questions must be answered by placing a tick in the box/s next to the correct answer/s or writing your answer in the space provided. This assessment will remain current until renewal on an annual base.

Question 1

What are your sites PPE requirements?

Question 2

Name 3 critical risks you could be exposed to whilst performing loading or unloading tasks.

1. _____
2. _____
3. _____

Question 3

If the Gross Vehicle Mass (GVM) for a truck is 35t and the Tare weight is 17.5t, what is the maximum weight of your load allowed to be?

Question 4

When loading product, drivers must ensure the following: Circle all letters that are true.

- a. Any damaged product must not be loaded, and it must be reported to Despatch, and logged via the appropriate portal
- b. Truck operators can be on the deck when you are loading to help position product.
- c. The area in which product is being loaded is clear of bystanders (3m) and clear of any moving trucks.
- d. The deck is free of hazards that can damage product e.g. chocks, chain ratchets, chains etc.
- e. All tasks shall be completed from the ground, (only when there is no other possible way of performing the task from the ground is working on the deck permitted, access and fall protection shall all be considered prior to accessing the deck).

Question 5

Driver and all pedestrians must be at least 3m clear of forklifts 7 tonne or greater.

True False

Question 6

List 3 forklift safety rules when loading trucks.

1. _____
2. _____
3. _____

Question 7

What should the driver be checking restraints for before using them?

Question 8

Forces (payload forces) act on a load when it is moving. Loads need to be restrained to manage these forces. Load restraints must be strong enough to:

Question 9

Should all lifting equipment be tagged and tested?

- Yes No

Questions 10

When reversing, what must the forklift operator do?

- a. Press the horn and place in reverse.
- b. Get out and walk around to see if anyone is close.
- c. Just reverse as the forklift has right of way in all operational areas.
- d. Check that the area is clear by using side and rear mirrors before reversing.

Questions 11

You should always work from the truck deck as its easier to apply restraints and chocks.

- True False

Question 12

Prior to leaving the yard what are 4 things the driver should do?

1. _____
2. _____
3. _____
4. _____

Question 13

Name 4 items that must be inspected prior to use of a spreader bar?

1. _____
2. _____
3. _____
4. _____

Notes:

www.watersandfarr.co.nz

0800 923 7473

