

The consequences of operating EWPs on inclines, soft ground and unsupported surfaces.



The Consequences to the operator and persons in the vicinity of an EWP overturning, or becoming unstable, include the operator becoming trapped in the platform, life threatening injuries and fatalities.

Manufacturers develop **systems in EWPs to indicate, alarm, limit and/or prevent operation on inclines**. Manufacturers cannot control the site conditions or the transport procedures for the many varieties of EWPs.

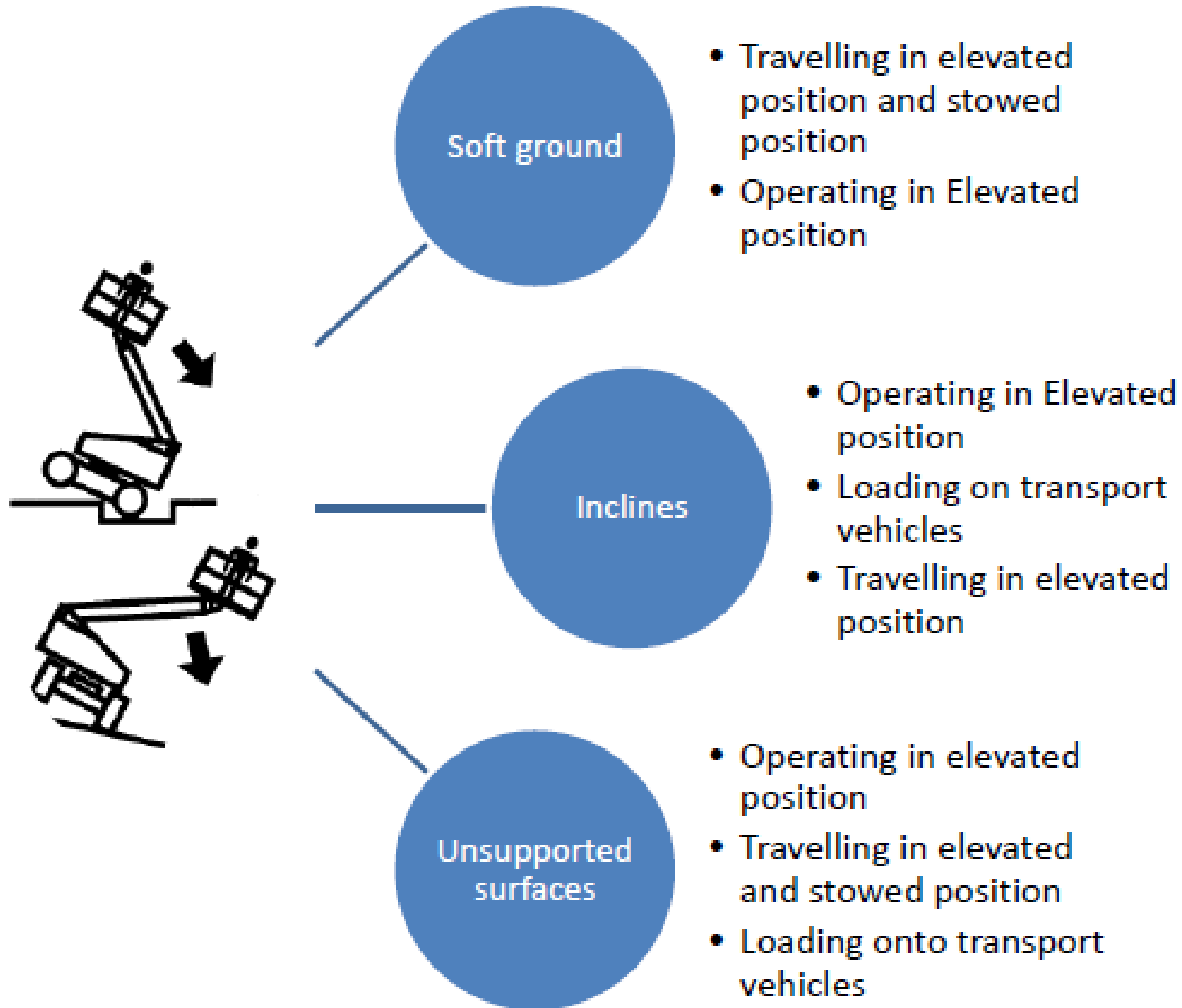
The site conditions and capacity of the support surface, to support the wheel loading of the EWP is an **important process required of the controller of the site**. This may result in exclusion zones and the requirements for a structural engineer to assess and report on the ability of the surface to support the load on tyres and where applicable, on outriggers.

Each EWP has a wheel loading identification near each wheel. If these are not visible, consult the manufacturer with the model and serial number of the EWP to obtain its wheel loading. Do NOT make an educated guess, as the load on the wheel/outrigger increases as the boom extends out past that wheel or outrigger tipping line.

Transport procedures and loading onto tilt trucks and low loader ramps introduces a new set of risks that needs to be addressed by reference to the Manufacturers transport instructions.

Worksafe NZ and Manufacturers want the persons using EWPs to go home safe at the end of each working day. The Worksafe NZ recommends that you take notice of manufacturers instructions and your organization can use this enclosed information, **provided from information available in the public domain**, as a reference document indicating what can go wrong. A list of WEB Links to the **Vertikal.net** site is shown on the last page of this presentation.





Soft Ground. Fatality . Europe.

<http://www.vertikal.net/en/news/story/14808/>



<http://www.vertikal.net/en/news/story/15844/>

Unsupported surface.
Wheel into void.
Rescued operator.
Europe.



Broke through underground void. one fatality from catapult effect, other operator rescued. Australia.



<http://www.vertikal.net/en/news/story/11356/>

The boom's wheels sank into the soft ground, the machine overturned and the platform was thrust under water, giving the operators a soft landing, but potentially trapping them with their lanyards.

The two were ignoring most safety advice and training not to use a harness and lanyard while working over water, and to use a life vest, **but they did manage to unclip themselves and swim to safety.**



<http://www.vertikal.net/en/news/story/14971/>

Excessive backward incline. Tip over backwards. Rolled over sideways into driveway. One Fatality. Australia.



Floor load exceeded. Structural collapse of carpark. USA.



<http://www.vertikal.net/en/news/story/10406>

Soft ground.
Catapult.
Fatality.
USA.

<http://www.vertikal.net/en/news/story/14894/>



Soft Ground.
Catapult
effect.
Injuries.
Europe.



<http://www.vertikal.net/en/news/story/14857/>

While we do not know what caused the machine to overturn, the fact that it was being used in fairly deep snow which hides the ground conditions - including slopes and voids - is possibly a clue.

Operator rescued from dangling in harness.

USA.



<http://www.vertikal.net/en/news/story/22003/>

Unsupported surface.
Electric culvert cover
collapsed.

Operator rescued.
Australia.

<http://www.vertikal.net/en/news/story/17163>



A boom lift overturned earlier today in Roosendaal, the Netherlands when the ground - gave way under one of its wheels.

With wheel loadings on a boom of this size easily exceeding four tonnes – concentrated by the unyielding poly filled tyres – it can prove to be too much for the interlocking blocks to support.

1 Injured operator. Netherlands.



<http://www.vertikal.net/en/news/story/22034/>



A golf tournament was being broadcast at the time and the boom was being used to raise a communication antennae in order to get a clear signal over the nearby cliffs. The antennae were located on the platform and the boom was fully raised and fully extended with the superstructure slewed over the side. A freak gust of wind of over 70 knots, a category 1 hurricane, 129kph / 81mph/ Beaufort scale 12 , caught the machine head on, which combined with the lack of weight in the platform and the fully raised boom caused it to go over backwards. Property damage only. No Injuries. North Island, New Zealand.

<http://www.vertikal.net/en/news/story/6927/>

See the next page and consider lessons learnt on this Golf Course site.



The North American camera team rented a lift to serve as a high level camera stand for the same golf tournament, the Kiwi Golf Challenge, in which a fully extended 135ft boom lift tipped over crushing a minibus. It is surmises the fact that the Camera Crew were from 'out of town' was a factor in them accepting and using improvised equipment that would not be acceptable elsewhere in the developed world !

No Harness, outriggers up, bolted wooden pallet.

No Injuries. North Island New Zealand.

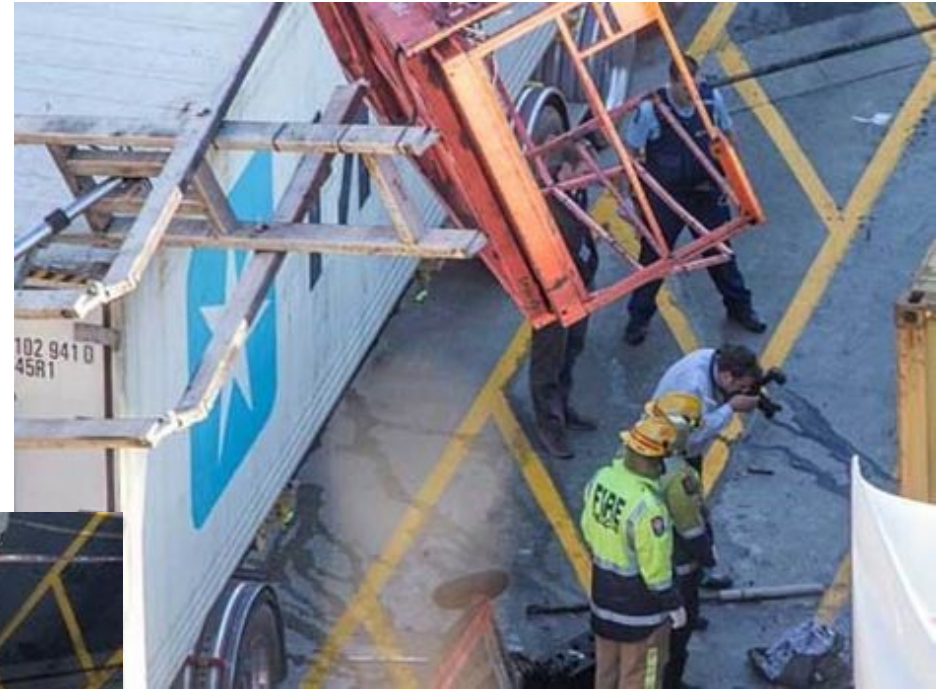
<http://www.vertikal.net/en/news/story/6953/>



A man has died at Lyttelton Port, Christchurch, after the scissor lift he was using overturned and landed on a tractor trailer loaded with a container.

Fatality. Property damage.

New Zealand.



<http://www.vertikal.net/en/news/story/20895/>



<http://tvnz.co.nz/national-news/worker-killed-in-lyttelton-port-accident-6066652>

A truck mounted platform over-
turned as it took a bend in the
road in Island Bay, just south of
Wellington in New Zealand.

No Injuries. Property damage.



<http://www.vertikal.net/en/news/story/17384/>



<http://www.vertikal.net/en/news/story/13700/>

Two men were working from a platform around 10 metres up when the lift ran away and/or overturned. The men were properly harnessed and tied in, but the overturning caused fatal injuries to one man, while the other has been airlifted to hospital.

Wellington, New Zealand.



<http://www.vertikal.net/en/news/story/12490/>

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Samples of symbols used in operators manuals to indicate instability on soft ground and on inclines.



These are the included reference links from [Vertikal.net](http://www.vertikal.net)

<http://www.vertikal.net/en/news/story/10406/>

<http://www.vertikal.net/en/news/story/17174/>

<http://www.vertikal.net/en/news/story/16418/>

<http://www.vertikal.net/en/news/story/17163/>

<http://www.vertikal.net/en/news/story/15844/>

<http://www.vertikal.net/en/news/story/11561/>

<http://www.vertikal.net/en/news/story/14894/>

<http://www.vertikal.net/en/news/story/17510/>

<http://www.vertikal.net/en/news/story/11356/>

<http://www.vertikal.net/en/news/story/14971/>

<http://www.vertikal.net/en/news/story/14857/>

<http://www.vertikal.net/en/news/story/14808/>

<http://www.vertikal.net/en/news/story/16921/>

<http://www.vertikal.net/en/news/story/10828/>

<http://www.vertikal.net/en/news/story/15695/>

<http://www.vertikal.net/en/news/story/17510/>

<http://www.vertikal.net/en/news/story/9384/>

<http://www.vertikal.net/en/news/story/22034/>

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<http://www.vertikal.net/en/news/story/20895/>

<http://tvnz.co.nz/national-news/worker-killed-in-lyttelton-port-accident-6066652>

<http://www.vertikal.net/en/news/story/17384/>

<http://www.vertikal.net/en/news/story/13700/>