

# LESSONS LEARNT: EMPTY CONTAINER DISLODGEMENT

**LOCATION:** CLYDEPORT – DUBLIN CONTAINERS & TRANSPORT LTD (DCATS)

**WHEN:** 21/01/2024



## Event Description

On the evening of Sunday the 21st of January 2024, Storm Isha passed through the Dublin area, bringing with it an Orange Weather Warning and extreme high-speed gusts of wind. At 18:57, an empty 45ft container stacked near the perimeter fence of DCATS was blown from its position, toppling down the tiers of the stack and landing partially on the fence below (See Image 1 and 2).

A second 45ft container followed, toppling down the stack – this landed on the container located on the fence, which due to its angle acted like a fulcrum, allowing the second container to clear the fence and come to rest on the public roadway outside of the Terminal. Afterwards, a further stack of containers toppled within the confines of the Terminal – Two of these containers cleared the internal fence and came to rest on the Terminal Exit Lane.

No personal harm resulted – Damage was sustained to the DCATS perimeter fence, as well as a local authority lamp post.

## Key Lessons

- While the containers were stacked no more than ‘one high / 6 metres from the boundary’, as per the associated Container Stacking Guidelines, this separation proved to be inadequate due to the particular sequence and manner in which the containers toppled – Separation distance has now been increased by 40% and perimeter tier stacking configuration switched to 1-1-2-3-4-5 (See Image 3). The Container Stacking Guidelines are under review as a result of the incident.
- A TBT has been developed to highlight and refresh the Container Stacking Guidelines to all staff who work in DCATS. The associated Risk Assessment / Safe System of Work has also been updated to specifically reference mandatory boundary stacking rules.
- A documented check by the DCATS Supervisor has been introduced to ensure compliance with boundary stacking rules, as well as confirming that stacked containers are bunched tightly together and fully aligned ‘casting to casting’. This will be undertaken routinely, rather than just when adverse weather is forecast.

## Immediate/Direct Cause

Severe gale force wind speeds of over 120 km/h impacted the stacking area, resulting in empty containers toppling within the west end of DCATS.

## Basic / Contributory Factors

- The containers were stacked no more than ‘one high / 6 metres from the boundary’, as per the associated Container Stacking Guidelines for the area.
- The sequence and position in which the containers toppled led to the second container clearing the fence.
- Stacking immediately adjacent to boundaries is covered within the DCATS ECH training, however was not clearly referenced within the associated Risk Assessment or Safe System of Work.
- On review following the event, several stacked containers in DCATS were noted not to be fully aligned ‘casting to casting’.

## Photos/Images

Image 1

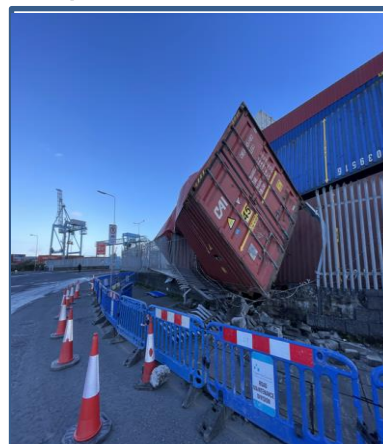
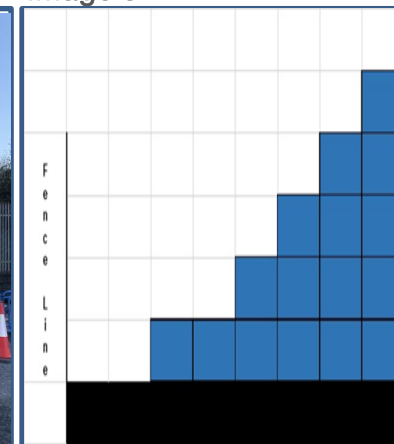


Image 2



Image 3



**BRIEF BY:** 12/04/2024    **DISPLAY UNTIL:** 30/04/2024



# Safety Alert

Ref No: SA-004-2024

26 March 2024

## Empty container dislodgement

### What happened:

In January 2024, Storm Isha brought severe gale force winds of over 120km/h to the Dublin area.

The winds blew an empty 45ft container stacked near the perimeter fence from its position and it toppled down the tiers of the stack and landing partially on the fence. Following this, a second 45ft container toppled down the stack, over the first container and coming to rest on a public roadway outside the Terminal (image 1 and 2). A further stack of containers toppled within the Terminal – two of these cleared the internal fence and came to rest on the Terminal Exit.

No one was injured in the incident – damage was sustained to the terminal perimeter fence and a local authority lamp post.

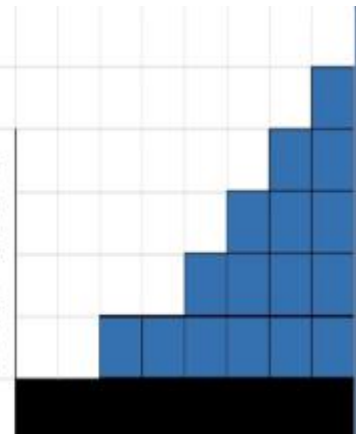
Image 1



Image 2



Image 3



## Key findings:

- The severe gale force winds of over 120 km/h impacted the stacking area, resulting in empty containers toppling.
- Container Stacking Guidelines of no more than 'one high / 6 metres from the boundary' was followed correctly.
- The sequence and position in which the containers toppled led to the second container clearing the fence.
- A review following the event revealed several stacked containers were noted not to be fully aligned 'casting to casting'.

## Subsequent Actions:

- Peel Ports separation distance has now been increased by 40% and perimeter tier stacking configuration switched to 1-1-2-3-4-5. (Image 3).
- A routine document check by terminal supervisors was introduced, to ensure compliance with boundary stacking rules, as well as confirming stacked containers are fully aligned.

## Considerations for members:

Members carrying out container operations may wish to consider the following actions:

- Review associated risk assessments and safe systems of work to ensure that the hazards associated with high winds are considered.
- Review separation distances in container storage areas to confirm they are appropriate.
- Implement routine, documented reviews of stacks (not just prior to adverse weather) to ensure containers are fully aligned.

PSS would like to thank Peel Ports for sharing the details of this incident and the related learnings at the base of this alert.