

# Guideline for End Tipper Unloading Exclusion Zones

August 2019



## PURPOSE

This Guideline has been developed to provide an industry-wide consistent approach for End Tipper Unloading Exclusion Zones to ensure that aggregate material is delivered safely to customer sites.

## BACKGROUND

A tipper truck can become unstable and overturn when tipping/unloading for a number of reasons including:

- Tipping on a cross slope or uneven ground;
- Tipping on soft ground that can cause the trailer to sink and lean;
- Not tipping with the truck and trailer in alignment;
- Load sticking in the body, uneven loading or overloaded;
- Moving forward causing instability whilst unloading at height;
- Raising body too quickly with excessive product retained inside the body;
- Poor maintenance of the chassis, tyre pressure and suspension;
- Strong cross winds; and/or
- Tailgate does not open.

Whilst there are numerous actions that can be taken to manage these factors it is not possible to completely eliminate the possibility of a tipper truck tipping over. As well as a sideways tip over, dog trailers may also tip over backwards when unloading if the tailgate does not open.

This clearly represents a serious hazard to anyone that may be within the fall zone of the tipper at the time. As such, it is an essential safety procedure to enforce the End Tipper Unloading Exclusion Zones for all personnel during the unloading process.

## SUMMARY - 15 + 5 + 5 OR RISK ASSESS

1. Standard End Tipper Unloading Exclusion Zones = 15 metres to the side, 5 metres to the rear and 5 metres in front
2. If this is not feasible, complete a risk assessment that achieves a reduced Exclusion Zone
3. The Exclusion Zone must be at least the fall zone of the truck/trailer with the body raised
4. Implement the Exclusion Zone





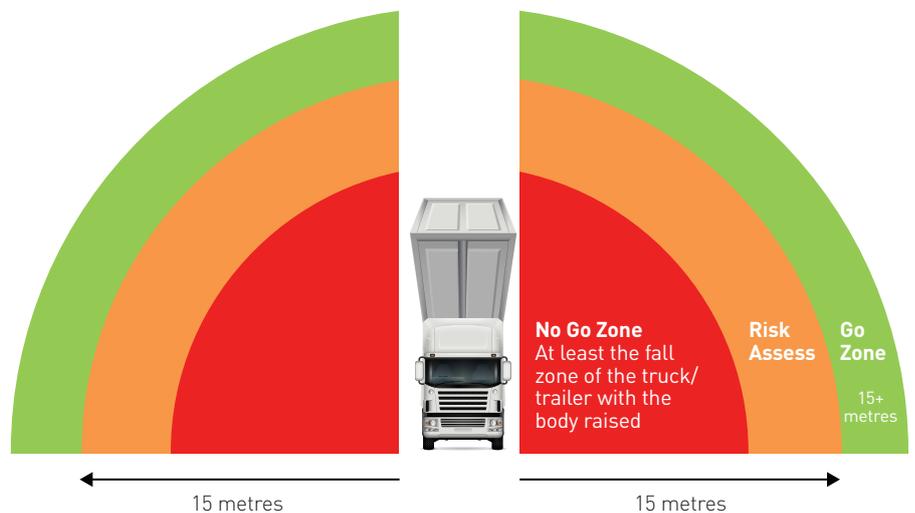
**RECOMMENDED CCAA END TIPPER UNLOADING EXCLUSION ZONES**

- CCAA proposes a standard 15 metre Exclusion Zone at all times for all personnel and plant to the **sides** of the tipper truck to be enforced only when it is actually tipping/unloading material. The 15 metre End Tipper Unloading Exclusion Zones provides for a safe environment even for semi's which have the highest tipping height of typically 10 metres. In the event this cannot be achieved, refer to the Risk Assessment section.
- A 5 metre exclusion zone **behind** the truck/trailer should be maintained whilst it is actually tipping/unloading. In some cases equipment (for example asphalt pavers, etc.) will need to operate in the rear exclusion zone because the material in the truck/trailer is being unloaded into it. In such cases, a Risk Assessment should be completed.
- A 5 metre exclusion zone in **front** of the truck should be maintained whilst it is actually tipping/unloading. In some instances (for example unloading into a drive over bin system at a concrete batch plant where the truck is stationary, etc.) the front exclusion zone may be entered. In such cases, a Risk Assessment should be completed.

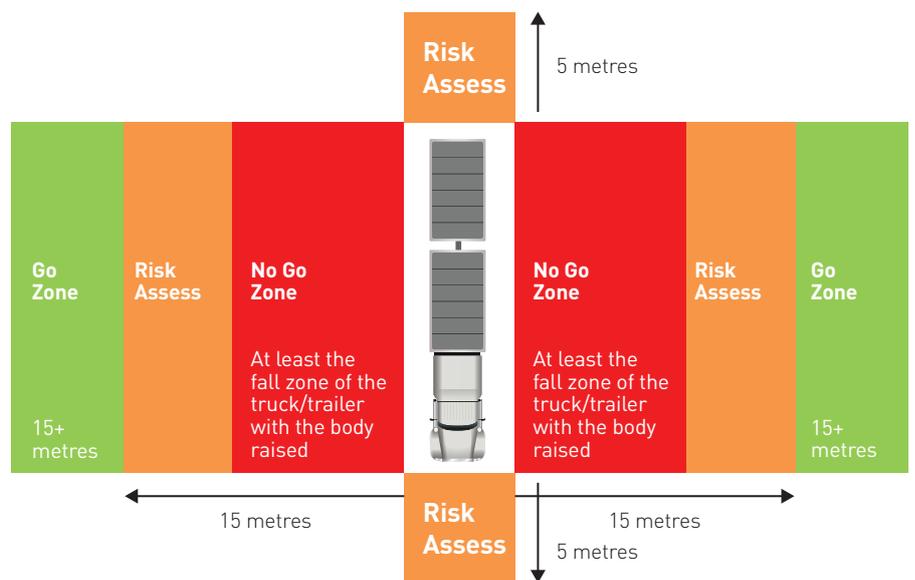
Unloading is defined as the process of discharging the entire load of aggregate from a tipper truck. The process of unloading starts as soon as the body rises from the chassis until the body lowers to a stable position, usually within 1 metre of the chassis.

Personnel includes workers on foot, other pedestrians, drivers and those operating machinery on site.

Customers should establish the End Tipper Unloading Exclusion Zones during the planning stages of a job.



End Tipper Unloading Exclusion Zones – side view



End Tipper Unloading Exclusion Zones – helicopter view

**Note:** Typical Fall Zones are detailed overleaf.

**RISK ASSESSMENT**

If 15 metres side, 5 metres rear or 5 metres front cannot be achieved, a Risk Assessment should be completed. The Risk Assessment should take into account factors such as, but not limited to:

- The elevated height of tipper bin conducting the work;
- Traffic control;
- Low friction body liners;
- Weather conditions, wind strength;
- Lighting; and
- Ground conditions – ideally flat, hard ground with no holes, trenches or ruts.

It is always preferred to isolate people from the hazard or to reduce the risk through engineering controls rather than relying on administrative controls only, such as signs and work methods.

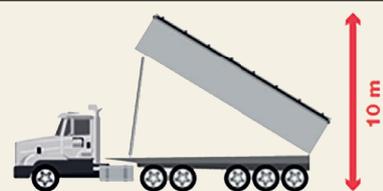
**FALL ZONES**

At no time should the End Tipper Unloading Exclusion Zones be less than the fall zone of the truck/trailer with the body raised. This fall zone varies with truck/tipper configuration. Typical elevated heights for various truck configurations are provided.

**TRAFFIC MANAGEMENT**

Active traffic management may also be required to enforce the End Tipper Unloading Exclusion Zones for roadside aggregate delivery whilst the body is raised for tipping.

**Typical fall zones for various truck configurations**

Truck type	Typical tipping height = fall zone
Single Axle	
Tandem	
Truck & Trailers	
Twin Steers	
Quad Dogs	
Semi's B Doubles 6 Axle Trailers	

**Note:** Actual tipping heights of the specific truck should be determined for any site risk assessment.



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