



# SAFETY ALERT

## Failure of scaffolding

### INCIDENT

A worker sustained two dislocated shoulders and a fracture to the shoulder when the decking of scaffolding collapsed causing him to fall 3.5m onto a moving conveyor.

### CIRCUMSTANCES

Scaffolding had been set up over a conveyor belt for the purpose of installing megabolts. The scaffolding was set up to span the conveyor belt and was a 3.1m in width. The 3.1m span necessitated the use of *extendable transom trusses*. These types of transom trusses require *ledgers* to be used as spreader bars to prevent the trusses bowing sideways and the decking planks dropping through.

*View underneath the scaffolding looking toward the roof showing only some ledgers in place*

Ledger placed during investigation

Extendable ledger transom truss



Two ledgers in place prior to incident

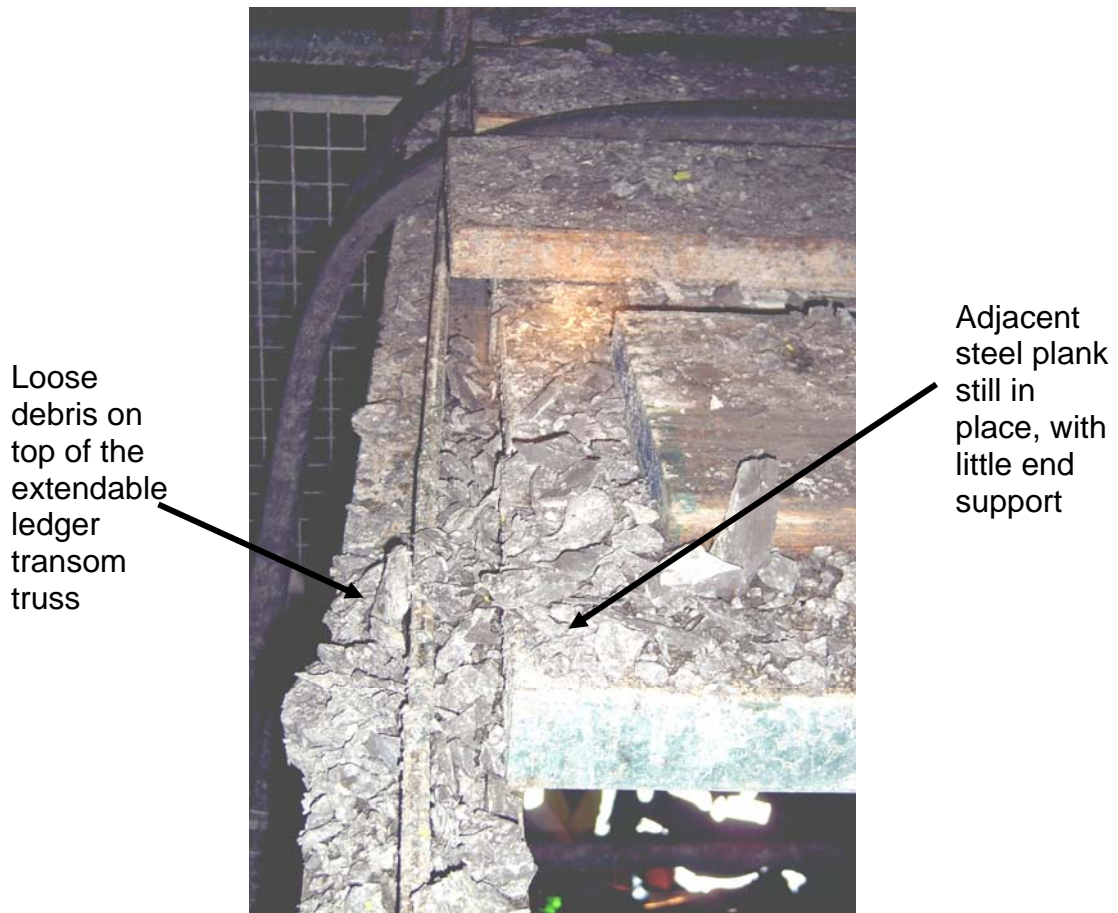
The ledgers (used as spreader bars) hold adjacent extendable transom trusses together to prevent sideways movement of the transom trusses.

## INVESTIGATION

The scaffolding design required that three ledgers be installed as spreader bars in each 3.1m bay of the scaffolding to ensure rigidity of the structure. There were no such ledgers present in one bay of the scaffolding. The absence of such ledgers allowed the transom trusses to bow outward resulting in the steel deck planks supporting a workman to slip from the transom trusses. The steel deck planks and the workman fell through the scaffolding frame onto the moving conveyor.

The workman was carried 60m before the conveyor was stopped by his workmates.

### *View from the top deck*



***Note the bend in the transom truss and limited end support for the steel plank***

## RECOMMENDATIONS

1. Ensure the Contractor Management Risk Mitigation Measures are applied to sub-contractors.
2. Ensure the Standards of Mechanical Engineering Practise (commissioning) are utilised for all equipment on site.
3. Ensure that construction is checked for compliance against design.
4. Use a checklist (such as that provided in AS/NZS 4576:1995 – Guidelines for Scaffolding) for the handover certification from the scaffolder to all end users.
5. When using non-rigid transom trusses take extra care to ensure they are effectively prevented from any sideways movement.

**NOTE:** Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations.

**Signed**



**Rob Regan**  
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**MINE SAFETY OPERATIONS BRANCH**  
**NSW DEPARTMENT OF PRIMARY INDUSTRIES**

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