highways england

INFORMATION

Safety Alert

Paving slab RIDDOR incident

16 September 2019

The following pages of this safety alert were issued by Highways England's supply chain partner:

A14 Integrated Delivery Team working on the A14 Cambridge to Huntingdon scheme

Designers Safety Alert

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Location of incident:	BN07 East Bound	Incident - Date:	13/07/2019	Time:	12-48
Injury Severity:	Major Injury	Level of investigation completed:	High		
A14 Reference No:	2019-895-3	Potential severity:	Major		
Alert Completed by:	Designers (Tim Bowes)	People Involved:	Pavers		

Details of Incident:

Operatives were laying paving slabs as part of under-bridge slope projection works. They had removed a 600mm x 600mm x 50mm paver, weighing approximately 41kg, temporarily storing it on it's edge on the already laid pavers on a near-level surface, to allow them to adjust the bedding. Without warning, the slab fell on the operatives' foot, twisting the ankle and fracturing the fibula.

The slab unit size was agreed with the contractor during the design phase where it was also agreed to employ mechanical handling techniques to lay the slabs. Notwithstanding this the collaborative approach of the wider team and joint consideration of the risk did not prevent the incident occurring during an unplanned part of the operation.

While the large size and weight of the concrete paving slab was not attributed to be the root cause of the incident it was considered to be a contributory factor to the injury.

During the investigation into the incident the design solution to deliver the required function of the finished surface under bridges has been investigated in respect of;

- the specification (with measures to mitigate against risks) of large, heavy concrete units,
- whether it was reasonable to expect mechanical lifting was feasible during all stages of the construction process, and
- whether the design reduced risk to 'As Low As Reasonably Practicable'.

Photos:

Re-enactment of the incident

Suspected slab position on operative

Positive Controls / Aspects evident during the investigation:

- Early engagement between designers and construction team in relation to agreed underbridge protection specification and methodology.
- Hazard warnings shown on drawings and SHE box entries linking manual handling risk and mechanical handling requirement to Design Risk Assessment record.

Key Learning Points:

- Designers shall take account of their CDM duties to reduce risk to 'As Low As Reasonably Practicable' while considering construction, maintenance and decommissioning of the asset.
- Consider alternative solutions, not just '*what has always been done'*.
- Length of sloped surface, gradient, width available behind Vehicle Restraint System, location of services, associated HS&W requirements etc. will all impact on the materials and products chosen and the construction methodology to be used.
- Where concrete products are to be used the designer should look at solutions reducing manual handling risks, cutting (exposure to Silica dust, noise and vibration (Hand Arm Vibration Syndrome)) and material wastage. Slabs are to be stored flat at all times.

Basic Risk Factor:							
☐	Communication	☐	Defences	☒	Design	☐	Error Enforcing Conditions
☐	Housekeeping	☐	Incompatibility of Goals	☐	Maintenance Management	☐	Organisation
☐	Procedures	☒	Tools / Equipment	☐	Training		

Distribution:							
☒	All on A14	☒	HSW Section Leads	☒	Parent Companies	☒	Supply Chain

Action Required:

Following the incident work has commenced with the Designers on the A14 to review the method of protection beneath bridges. A workshop with the designer, operations and HSW was held on 13th August.