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Newark VPMP project

Tarmac Building Products > Newark Aggregate Blocks 1 2 6

FINALIST

ON VIDEO

Pedestrian crossing

DESCRIPTION

Newark Aggregates Block plant had a complex traffic route system, with little control for incoming materials and outgoing product. There were several issues with the system that put both drivers and pedestrians at risk. A major review of the plant layout and traffic management was required. This was developed by a team lead by the new site manager including representatives from manufacturing, operations, employees from across the site and representatives from the drivers.

The development and implementation of the plan was an iterative process, with changes being further refined based on feedback after initial modifications. Some areas of particular concern were;

Block haulier waiting area

Located on a live traffic route, hauliers would often leave their cabs putting themselves at risk. As space was limited, the waiting vehicles often stood across the entrance to the car park, severely limiting visibility for vehicles trying to enter or exit. Often, the lorries waiting were queuing past the line of TBP property.

Tipper/tanker access to site

Tippers and tankers both accessed the site through the main site thoroughfare – passing block collection hauliers, the car park, and multiple pedestrian crossings. Some mistakenly joined the block haulier queue thinking this was the general access point to the site. The tipper and tanker drivers were required to drive through a two-way traffic system to access the aggregate yard where congestion increased the risk of collision. The access here was uncontrolled leading to risks associated with tandem tipping and collision. There was no clear ownership for the control of this area from site personnel.

Loading areas

There were no defined loading areas in the site VPMP, creating a risk of hauliers driving to the wrong area and potential collision with production vehicles. The loading area was located close to the finished goods yard and plant take-off point resulting in the hauliers potentially interfering or colliding with mobile plant servicing these areas.

Site signage

An audit of the signage revealed that there were too many signs, some which were obsolete and more importantly, site users found them confusing.

The following initiatives were introduced to improve site safety and address the issues highlighted

- The car park was relocated to the other side of the site entrance
- Concrete block system was introduced to car park to improve protection
- The old car park was converted into a designated waiting area separate from live traffic routes
- The two-way system was converted into a one-way traffic system
- The new route was clearly signposted as "Tipper and Tanker Lane" using motorway-style signs
- A control gate was installed at the entrance to the aggregate yard controlled by the shovel driver.
- The loading area was relocated away from the production take-off point
- Clamp trucks upgraded from 2 to 4 packs to improve efficiency of loading
- A control barrier was installed at the entrance to the loading area
- Designated loading bays were introduced to the VPMP, and lines painted onto the yard
- Clamp truck drivers were given control over their own area
- Signage updated across site including the introduction of some motorway-style
- Leaflet and briefing provided to employees on the site changes
- Hauliers were also given the leaflet and changes included in the induction pack
- New risk assessments were completed before the new system went live
- The new system was closely monitored using daily walk arounds by the manager
- Introduction of ARMCO barriers and flexible highway posts for the haulier exit lanes
- CCTV has been installed covering much of the site.

BENEFITS

- Risk of pedestrians being struck by vehicles significantly reduced
- Risk of collisions between vehicles considerably reduced
- Pedestrian crossings reduced from 3 to 1.
- Improved access, visibility, and safety for users of the car park
- Mitigated risk of hauliers leaving their cabs in non-pedestrian environment
- Reduced traffic queuing – no longer extends beyond TBP property
- Loading times halved
- Hauliers restricted to production yard in the plant
- Safer and quicker access and exit for tipper and tanker drivers
- Time spent on-site by vehicles reduced by circa 50%
- Operation of yard considerably safer as now controlled by shovel driver
- All site users have greater clarity on where they should be
- Significant mitigation of the risks of collisions
- Significantly improved traffic flow – crossover points reduced from 5 to 2
- Enhanced security and control over whole site
- CRH have won a safety award for this development.

TRANSFERABILITY AND DEVELOPMENT

- Newark is following an on-going programme of review and incremental improvements. Plans include demolition of an old mechanical workshop which will eliminate a blind spot and relocation of the weighbridge improving access and checks on-site.
- While the new layout is site specific, many of the ideas could be adapted and applied at other sites. The signposting, waiting area and minimisation of pedestrian crossings can be applied to all sites with vehicle movement.
- This best practice has been shared throughout TBP Aggregate Blocks division and has also won a CRH safety award for best practice across all CRH sites.

Improved site layout and control

New motorway style signage and improved traffic flow