



21167 Illuminated demarcation of pedestrian crossing points

Hanson > Whatley Quarry **1** **2**



DESCRIPTION

Whatley Quarry is a 6mt, 24-hour operation with 100+ persons on-site working on a 3-shift system. The site has a variety of machines such as CAT 777 RDT's with 100t payloads and 992 FEL's with 23t buckets which use the roadways to access the workshop facilities.

Pedestrians seeking to move between the unit office and the workshop were protected by barriers and pavements until they reached the gated crossing point. The route was used by employees, contractors, and visitors. Historically, the site had no lights controlling the crossing point, the working instructions were for all traffic to give way to pedestrians. This relied on the operator being able to see the pedestrian, hand signals and gestures between these parties would be used to communicate intentions.

A set of traffic lights was introduced, and signs were removed or repositioned to improve visibility for all users. A crossing control button was added to allow pedestrians to set the traffic lights.

A working party to review further enhancements to improve the crossing was set up. It had representatives from employees at all levels and was supported by an external safety specialist. The group recommended that an illuminated demarcation system supplied by FHOSS should be installed. The system lights up the crossing point and changes colour in synchronisation with the traffic lights, ensuring the pedestrian knows when to cross and the path to follow.

The main benefit of this solution was at night when visibility is reduced and there is less expectation from mobile plant operators that pedestrians would be using the crossing.

The solution effectively operates at two different levels.

1. Although the projected illumination runs 24hrs a day, road markings and the traffic lights are the main controls ensuring pedestrian safety when visibility is good.
2. As the light and visibility diminishes and road markings become less clear, the effectiveness of the new system is enhanced. Demarcation of the footpath boundaries are clearly imaged over the existing road markings and are further enhanced by visual projected signs.

The additional benefit of the projected demarcation is that it compensates for the wear of painted markings over time and the reduced visibility due to any mud or other spillage, the projected images will always be clear on the surface.

Whilst the objectives of the initial project remit were achieved, a further 4 crossing points were identified on-site which would benefit from this technology, it was installed at these crossings.

The improvements were shared internally across the business lines, with the Health & Safety Executive and via social media.

BENEFITS

- Improved safety for all pedestrians on-site
- Mitigates risk for pedestrians during night time operations
- Innovation applied to other crossing points on-site
- Positive impact on visitors using the site
- Improved safety culture within business
- Other organisations requesting visits to site to view
- Catalyst for considering other technology applications.

TRANSFERABILITY AND DEVELOPMENT

- The application can be used industry wide which could have a significant impact on the safety of night-time/low visibility operations. It is also transferable to other sectors e.g., construction sites and airports. It could easily be used as emergency exit demarcation for any environment
- Hanson has also used the projection in other areas such as loadout belts for loading material into HGVs
- Hanson is now working with FHOSS to broaden the portfolio including the following:
 - Illuminated livery (FHOSS Light Livery)
 - Projection (FHOSS Cast)
 - Hard hat illumination (FHOSS illuminated cord)
 - Illuminated exclusion (FHOSS Halo).