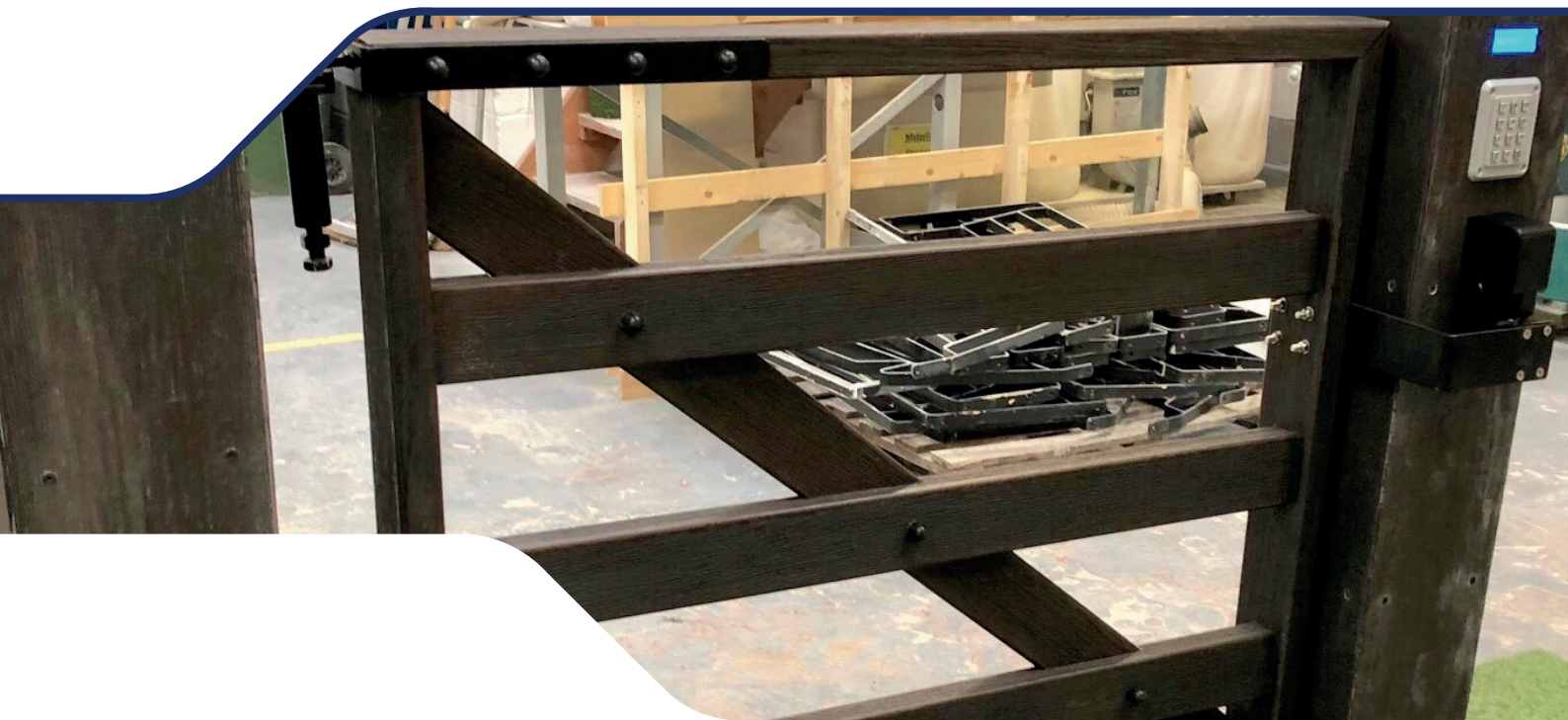


GateLock



The Challenge

Every year in the United Kingdom, there are incidents and near misses at User Worked Crossings (UWC's) through users not contacting the signaller at the controlling signalling centre and following verbal instructions, due to unfamiliarity, laziness and poor discipline. In terms of the classic six step risk model (ERIC PD: Eliminate, Reduce, Isolate, Control, PPE, Discipline) under ALARP (as low as reasonably practicable), the UK railway industry cannot currently afford to eliminate the amount of UWC's that exist.

The Solution

Park Signalling Ltd in collaboration with Heywood and Jackson Fabrications Ltd, have produced the GateLock product. The GateLock product is a GRP (Glass Reinforced Plastic) manufactured gate and post solution, fitted with an electronic gate locking system. The GateLock product contributes to greater control and increased discipline at UWC's. The GateLock product has the potential to provide affordable risk mitigation against the stated instances and issues.

Downsides have been recognized:

- GateLock can be beaten by determined abusive users
- GateLock Introduces extra steps for users
- GateLock could increase signaller workload (talking process through with users and looking up code)
- GateLock may need alternative telephone number for out of hours

Upgrades being considered:

- GateLock can incorporate communications and interface with GSM (Public and Railway).
- With communication equipment added, GateLock could automatically report open gates and could have an electronic release without the requirement for a release code.
- A future development is to use the GSM-R/Future Railway Mobile Communications Systems (FRMCS) Network in the UK as a concept. This network is intelligent enough to locate the current position of all trains. The GateLock product is proposed to interface to a lineside GSM-R/FRMCS telephone/s and/or a direct interface.
- The GateLock product is proposed to secure and release UWC gates controlled via the GSM-R/FRMCS as trains approach and pass the UWC's. Further development will be required.
- BUT all of these would add to the equipment complexity, installation and maintenance pushing the COST UP and limiting wide roll-out potential.

The Result

- GateLock fits the Network Rail strategy and challenges
- GateLock fits reducing risk at crossings
- GateLock encourages user behaviour at crossings
- It can provide basic maintenance diagnostic information
- Park Signalling Ltd and Heywood and Jackson Fabrications Ltd envisage that a purchase and fit pricing model would allow for cost effective risk reduction at a large number of UWC's
- Network Rail Design for Reliability and Product Acceptance processes are being progressed



Delivering value through:



**Product
Innovation**



**Optimised
Cost**



**Increased
Safety**



**Reduced
Risk**