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To whom it may concern

Dear Sir/Madam

Temporary Concrete Road Safety Barrier Connections - Notice of Inappropriate Practices

Over recent months, the Transport Agency has been made aware of a number of issues associated with the connection of temporary concrete road safety barrier units, both the public domain "pin and loop" design (unauthorised modification) and the proprietary "JJ Hooks" system (mismatching and handling damage), and unauthorised use of "retired" Quickchange® Moveable Barrier (QMB) units.

This letter is to confirm the Transport Agency considers these practices, which are discussed in detail below, unacceptable and that they must cease immediately.

At all times, all road safety hardware used for temporary traffic management on State highway sites must be in good condition and correctly installed in accordance with the manufacturer's instructions by appropriately trained persons.

Pin and Loop Connections

Inappropriate practices in regard to the deployment of the public domain pin and loop connections on temporary concrete road safety barrier include missing pins and the cutting ("gas axing") and subsequent re-welding of loops as shown in the photos below.

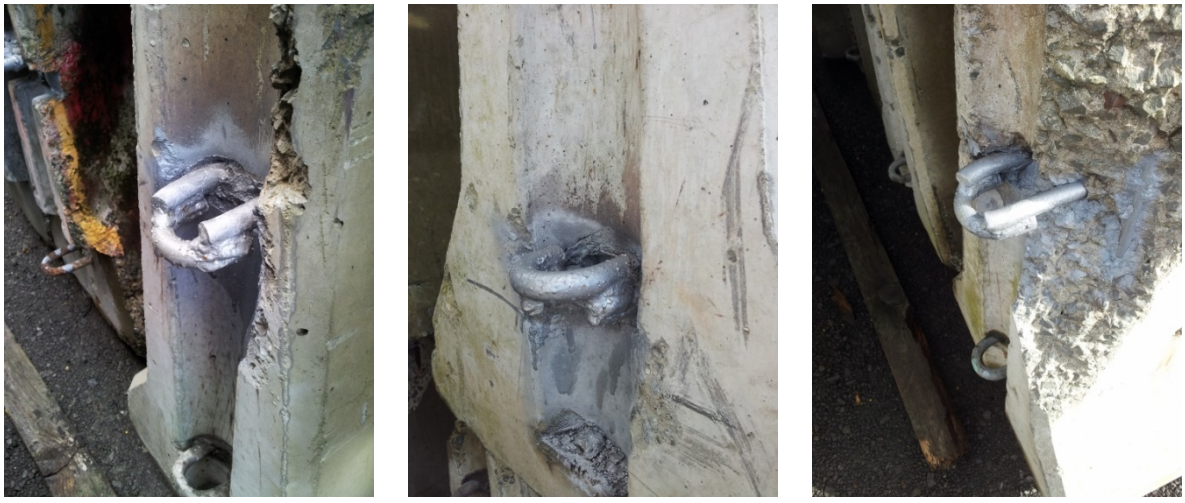


Figure 1: Examples of cut and re-welded loops (plus general damage from mishandling)

The desire to modify the pin and loop connection appears to result from the use of mis-matched Type A and B units which have the loops at slightly different heights to facilitate easy connection

when correctly deployed. Incorrect deployment results in units being mis-aligned vertically with the loop of one unit being "perched" on the next. On-site practices to rectify this include ignoring the misalignment (leaving the units raised above the road surface) and/or use of a sledge hammer or similar to bend the loop downward. Consequently, the pin is forced into the joint, often bending it or the loops further.

This damage compromises removal of the pin during relocation or decommissioning of the temporary barriers. It is at this time that the inappropriate practice of cutting the loops to facilitate pin removal is undertaken, followed by subsequent re-welding of the loops.

Any modification of the pin and loop joint in this manner results in an untested and potentially dangerous connection between temporary concrete road safety barrier units that places both workers behind the barriers and the travelling public at risk.

Any units that have been modified in this fashion or that have suffered joint area damage must be destroyed to prevent their use.

JJ Hooks Connections

The JJ Hooks joint system is a proprietary NZTA-accepted temporary road safety barrier connection system supplied by Tauren Barriers Ltd (under licence). The system utilises paired J- shaped hooks to form a mechanical joint allowing limited rotation with tensile capacity. The system does require a degree of care during on site handling operations to ensure correct engagement during deployment and to prevent damage during decommissioning/relocation activities.

Common issues include incorrect pairing of proprietary and non-proprietary units (see Figure 2 below) and incorrect handling resulting in wrenching open the joints rendering the units un-fit for future use (see Figure 3 below).

Both practices are considered inappropriate as the integrity of the connection is compromised and the connection will fail if impacted.

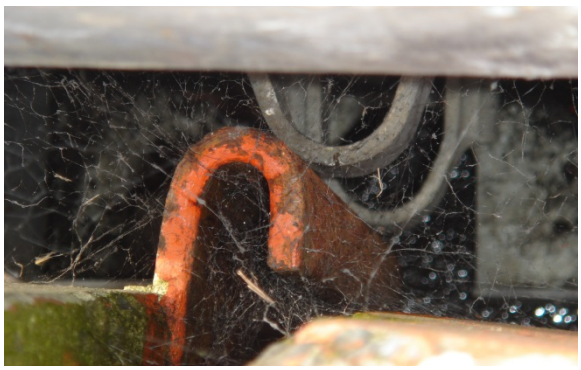


Figure 2: Incorrect pairing (JJ Hooks on left)

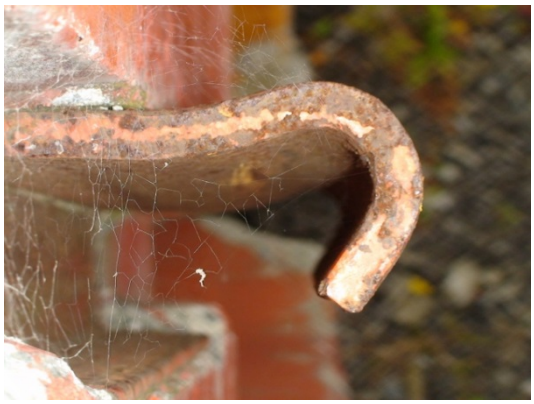
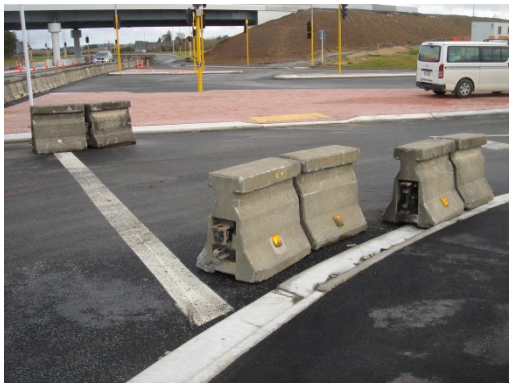


Figure 3: Wrenched joint

In all cases, the supplier of the proprietary system should be contacted for instruction on correct practices for safe and proper handling of the system units.

Quickchange® Moveable Barrier (QMB)

The QMB system (photos below) is a proprietary moveable barrier system utilised on the Auckland Harbour Bridge as a median barrier system to facilitate tidal flow operations whilst providing protection between opposing traffic.



The QMB system is not suitable for use at any other location on the State highway network. Use at other locations is considered a non-compliant activity. Any "retired" units must be scrapped or recycled to prevent their use.

Actions arising

Designers, contractors and auditors should note that without further notice, any instances of the practices outlined above or similar practices that are identified during CoPTTM audits or other site inspections will be considered non-compliant practice, rated as "dangerous" in accordance with CoPTTM Section A8, and a notice of non-conformance will be issued.

Please forward this correspondence to others in your organisation.

Yours sincerely

Fergus Tate

Fergus Tate
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Highways & Network Operations