

UNIVERSAL MOBILE LIGHT TOWER INTERLOCK

A universal interlock that results in safer movement and stowing of mobile light towers onsite.

Universal mobile light tower interlock is an engineering control that can be implemented on all makes and models of light towers onsite. It prevents movement of the mobile light tower while the mast is raised, and reduces risk of incidents when not in use.



1. Lock out the tow hitch.



2. Teether key(s) to top of mast (insert) and raise.



3. Mast must be lowered to tow.



Padlocking the tow hitch and tethering the key to the light tower prevents unsafe towing.

The Situation

Mobile light towers are an essential part of night-based construction works. Modern construction sites require mobile light towers to illuminate the works effectively, with regular repositioning to provide optimal illumination as works progress.

When in the raised position, the radius of the mobile light tower's danger zone is increased both vertically and horizontally. This risk is compounded if the mobile light tower is repositioned while the mast is still raised.

Large construction projects require numerous mobile light towers, particularly during occupations. This commonly results in the hire of mobile light towers from multiple vendors. In addition, supply of mobile light towers with preferred features, make and model is not always guaranteed.

Ensuring that masts are lowered when all types of mobile light towers are repositioned could reduce incidents.

The Solution

A simple but effective engineering control – a padlock, tether and key – was chosen to limit movement of mobile light towers with a raised mast. This combination acts as a universal interlock that can be rapidly deployed on any make or model of mobile light tower on site.

Activating the interlock

When the mobile light tower is in position and disconnected from the towing vehicle:

1. Use the padlock to secure the tow hitch in the unlatched position.
2. Tether the padlock key to the lowered mast.
3. Raise the mast.

Deactivating the interlock

To move the mobile light tower to another position:

1. Lower the mast.
2. Retrieve the key from the lowered mast.
3. Unlock the padlock from the tow hitch, permitting connection to a towing vehicle.

Benefits and learnings

The simplicity and cost effectiveness of the universal mobile light tower interlock enabled instantaneous deployment to any mobile light tower on site.

Additional benefit was realised when the mobile light tower's operating key was also tethered to the raised mast, meaning the mast must be lowered to retrieve the key for deactivation. This results in the mast being left in the safest position after each use, with a lower centre of gravity and potential incident radius.

The key learnings from the success of the universal mobile light tower interlock are:

- Simple engineering control
- Prevents risky repositioning due to:
 - plant awareness or training failure
 - distraction.
- Reduces duration that masts are raised and incidents involving:
 - impact of wind
 - subsidence
 - park brake failure
 - incorrect unit orientation
 - outrigger failure.

Program Office: Level Crossing Removal Project
Work Package: Western Program Alliance
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