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The wash plant at Dunain Mains had a live head feeding arrangement which was fed from a wheeled loading shovel. It entailed regular maintenance activities (screen renewal and welding repairs) which involved working at height and hot works which are deemed high-risk activities. The existing arrangements also exceeded noise levels and required ear protection to be worn.

The process involved the wheeled loading shovel operator having to exit his cab to ground level to clear the grid as the lifting mechanism of the live head was at ground level. The site was keen to reduce the access & egress movements of the operator.

It was decided that the live head unit be removed from service and replaced with a non-vibrating tipping grid, lifted by two heavy duty rams. The tipping grid would be activated by remote-control from inside the wheeled loading shovel reducing access & egress risk.

Please see additional pdf for details of the design process

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- Access and egress from the wheeled loading shovel to activate the tipping grid has been eliminated, as the operator can activate the grid from inside the cab.
- High risk maintenance tasks that include working at height and hot work activities have been significantly reduced. Working at height is highlighted in “The fatal 6”
- Maintenance teams were repairing live head at least once p/m for a duration of approximately 2 days.
- Reduction of at least 24 working at height tasks & 24 hot work tasks p/a
- Noise levels have been reduced significantly: Live head configuration 90 db (A); Tipping grid 56 db (A)
- Productivity and site morale has been boosted as the requirement of changing screen meshes has been eliminated, and the maintenance on the tipping grid has been greatly reduced.

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