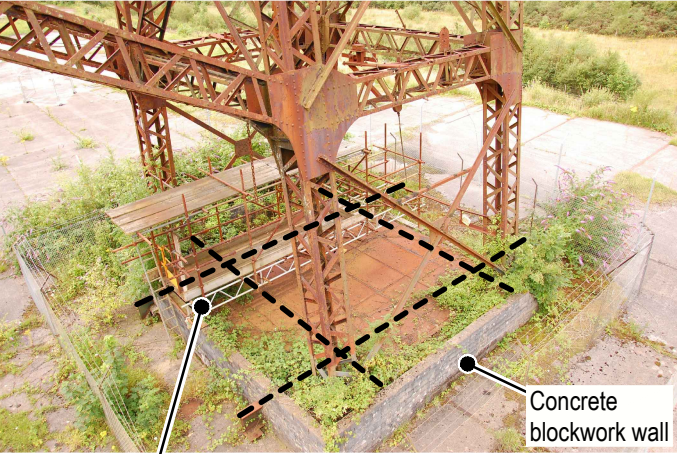


Elevated view showing typical condition of Headframe 1 shaft capping plates. Steel framing below of similar arrangement to that denoted on Headframe 2 (right).



HEADFRAME 1:
Accumulation of debris over plates to be removed. Fallen metalwork from within ventilation shaft to be retrieved for inspection.

Elevated view showing typical condition of Headframe 2 shaft capping plates. Steel framing below denoted by dashed lines.



HEADFRAME 2:
Safety and robustness of scaffold platform cannot be confirmed; platform to be dismantled and removed to accommodate anticipated working platforms erected by the Contractor.

BOTH HEADFRAMES:
It is understood that the existing shaft capping sheets were installed circa 1975; their condition is unknown.

ORIGINAL PROPOSAL
The Contractor was to allow for investigation to determine condition of the existing capping sheets, by removing a selection of sheets. Results of the investigation was to inform final repair works, for approval by the Local Planning Authority. It was assumed that the entire shaft capping structure could be replaced on a like for like basis (but in galvanised steel) if repair was not possible.

Repair Detail K
Renovation of shaft capping plates | Not to scale



PROPOSED WORKS:
Record the masonry to aid reconstruction of any dismantled areas.
Treat and remove vegetation growth from the masonry' removal of dense woody growth may require localised dismantling of the brickwork.
Clean loose bricks of mortar and rebed in sand:cement mortar.
Rake out and repoint areas of defective pointing in sand:cement mortar.
Ensure areas of mortar capping are effective in shedding water to the perimeter.

Repair Detail L
Conservation of masonry plinths to backstay support legs | Not to scale

REVISED PROPOSAL – HEADFRAME 2

Following closer visual inspection, it appears the sheets have been welded to the grid of steel beams supporting them, making their removal for investigation of the structure below difficult without 'hot works' (grinding or flame cutting) and the hazards that presents over historic mine workings (risk of explosions). Furthermore, investigation work or partial dismantling of the existing structure may disturb the upper extents of the mine shaft opening with potentially significant consequences.

Therefore, the following works are now proposed, with additional comments / justification noted:

1. A new access platform will be constructed over the existing capping structure.
2. In the first instance, the new access platform will allow the renovation works to take be undertaken safely, requiring the following elements of work:
 - a. Clearance of vegetation and debris and removal of the existing scaffold walkway;
 - b. Partial dismantling of the concrete blockwork wall to the eastern side of the shaft (which conflicts with new platform footprint);
 - c. The new structure takes support off the visible ends of the existing steel support beams, which are of sufficient cross-section to support the additional loading;
 - d. The original structure will be cleaned to receive an application of protective paint, accessed by removing individual open-grid deck panels of the new structure.

The LPA have confirmed they are content for the platform to be installed temporarily to facilitate the renovation works.

The blockwork wall is of little historical or architectural significance, and is through to have been constructed purely for abandonment of the mine workings in tandem with installation of the steel capping structure.

The new structure will be bolted to the top flange of the original beams, requiring four holes to be drilled into each beam-end to allow insertion of connecting bolts.

3. Upon completion of the renovation works, the new structure could be removed:
 - a. the dismantled section of blockwork wall would be rebuilt – we note the wall shows signs of movement and will require more extensive rebuilding.

Installation and removal will have negligible impact on the original capping structure which is of limited historical significance, being one of the last elements installed circa 1975 for the abandonment of the site.

The wall is of limited historical or architectural significance thus rebuilding can be undertaken without significant impact.

4. However, retention of the structure will offer further benefits:
 - a. The platform will provide a safe means of access for future maintenance and inspection of the structure;
 - b. The platform could also be used by museum visitors to view the structure (subject to other separate access provisions by the museum);

As the original capping structure cannot be verified, its robustness, particularly the capping plates, remains unknown and cannot be safely relied upon.

5. The following works are therefore proposed to realise these benefits:
 - a. The concrete blockwork wall is removed around the full perimeter (in lieu of rebuilding) to expose the original brick plinths that are largely obscured from view by the wall; the plinths will be subject to masonry conservation work in line with that already agreed by the LPA.
 - b. The new platform is retained permanently.

Photographic evidence held in the National Museum Wales' collection shows the pit head and brick plinths of Headframe 2.

The platform will be of unpainted galvanised steel construction to clearly identify it as a modern addition (the historic structure will all be painted). It can be dismantled and removed in the future, if required, with negligible impact on historic fabric.

REFER TO DRAWINGS 62253022-S-1020 AND 62253022-S-1021 FOR DETAILS OF THE NEW ACCESS PLATFORM TO HEADFRAME 2.

(SIMILAR APPROACH TO BE TAKEN WITH HEADFRAME 1, WITH DETAILS TO FOLLOW SEPARATELY FOLLOWING FURTHER INSPECTION)



Cardiff Office

+44 29 2076 9200

1 Capital Quarter,
Tyndall Street,
Cardiff CF10 4BZ

Drawn	Designed	Approved	Revision Date
A Swan	A Swan		12/08/2019
Project No.	Scale		
V-C8458.60	As noted		
Project			
Cefn Coed Colliery Museum Renovation of two Grade II* Listed headgear frames			
Sheet			
Repair details K + L Various detail, to be read in conjunction with Repair Schedule documents			
Drawing No.	Sheet No.	Revision	
CD-V-C8458.60	104	R1	