



STEVE MORGAN ASSOCIATES
CONSULTING ENGINEERS

Mr Stephen Jones
The Powerhall Limited
1st Floor Offices
24 Greenfield Road
Colwyn Bay
LL29 8EL

SRM/sm/1238452
05th September 2024

Dear Steve

PENNALTA COLLIERY, PENALLTA
STRUCTURAL STABILITY OF POWEHALL BUILDING

Following my visits to the above property, I would comment as follows: -

- 1.) The Powerhall is of solid masonry with structural openings at high level. The building is believed to have been completed around 1906. The structural openings at ground floor level in the external elevation have been filled in with brickwork/blockwork. The walls have full height brickwork piers between the structural openings which are visible externally.
- 2.) The property has a corrugated roof over supported on original lightweight steel trusses.
- 3.) Internally, the original arches over the structural openings can be seen. Based on the depth of the reveals to the window openings, the walls appear to be at least 500mm thick overall and of solid construction.

Cont/2.....



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- 4.) It is proposed to construct a timber structure internally to accommodate accommodation on at least four levels. The accommodation will also contain a central atrium. The timber structure will be designed as an independent structure.
- 5.) Internally, there is evidence of water ingress. This is due to the condition of the roof. There is no evidence of any major structural deterioration of the building as a result of the water ingress.
- 6.) The original powerhall contained large machinery associated with the coal mining operation on the site. The machinery has now been removed leaving an open slab with several voids. The voids form part of the original construction. The floor will require upgrading in the proposed development.
- 7.) There is some minor cracking to the left-hand gable end adjacent to the roadway. The cracking occurs between the first and second floor windows. The crack appears to have penetrated the full depth of the wall and is also visible internally. The crack will require a structural repair. The repair is likely to comprise a 'Helifix' type repair which involved stitching the crack with stainless steel bars. These repairs would be concealed and would not be obvious on the elevation.
- 8.) Internally, the blockwork infill to the windows is restrained with steel bars to ensure that the blockwork does not fall into the building. These restraints should be checked annually.
- 9.) The original crane girder which spans the width of the building has been retained within the building. Consideration should be given to the method of removal of the crane.

Cont/3.....



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10) The proposal is to construct an internal timber frame within the building. All vegetation growth to the internal elevations of the perimeter walls will require treatment to remove the vegetation and prevent further growth. This also applies to the external vegetation.

11) It would be prudent to temporarily extend and repair the downpipes to ensure that any rainwater discharge is directed away from the building.

Based on the above, the following is concluded-

- The original building appears in adequate condition with no evidence of any major structural deterioration. The walls are plumb with no evidence of excessive deflection, bowing or bulging. There is no evidence that the existing walls require additional support as there is no evidence that any support structure/buttresses have been removed.
- The proposed use of the building, i.e. domestic accommodation, is considered to be significantly less onerous than the original use, i.e. heavy industrial use.
- It is possible that localised repairs will be required to the inner skin as the building works progress however, there is no evidence of any requirement for major structural repair or strengthening.
- Based on the above, it is concluded that the structure to the Powerhall appears adequate based on an inspection, both internally and externally, from ground floor level.

Cont/4....



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Should you have any queries on the above, please do not hesitate to contact this office.

Yours sincerely,
For Steve Morgan Associates Limited

Steve Morgan
B.Eng. (Hons)., C.Eng., M.I.C.E.

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Figure 1
External elevation to Powerhall.



Figure 2
As Figure 1



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Figure 3
Internal elevation (1 of 2)



Figure 4
Internal elevation (2 of 2)



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Figure 5
Window infill restraints



Figure 6
As Figure 5



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Figure 7
Internal vertical crack to gable end window
corresponding to Figure 8



Figure 8
External crack to gable end window.



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