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Structural Report on 'The Blue Pool', Melksham and Comments on Feasibility of Proposed Changes

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Purpose of the Report

Structural Solutions was commissioned to carry out an inspection of 'The Blue Pool' in Melksham to determine whether there are any structural 'issues' with the building. Also, consider the proposed development changes to amalgamate this with the Assembly Hall from a structural aspect.

Introduction

The building is single storey with a flat roof constructed with masonry external walls supporting steel lattice roof trusses with profile metal roof above. We could not determine the build-up of the roof above the profile metal roof but believe that the roof finish is a waterproof membrane over insulation. Internally, walls of the administrative areas, foyer and the changing rooms are divided by concrete blockwork walls with a suspended ceiling below the roof. The roof above the swimming pool itself and adjacent fitness suite are of similar steel lattice trusses supporting a profile metal deck roof although there is no suspended ceiling in either area. The trusses over the swimming pool are supported each end by a structural steel eaves beam spanning between steel posts. The external south facing elevation is glazed and the north and west external elevations are concrete blockwork masonry with no windows except for a double door to the north west corner presumably used as a fire exit. The divide between the swimming pool and fitness suite is also glazed. The internal wall between the swimming pool and changing rooms is of concrete blockwork masonry and we believe is load bearing supporting the roof trusses over the Foyer. Finally, the Plant Room has a similar profile metal deck but is supported by structural steel beams rather than trusses.

The connection to the Assembly Hall to the east of the 'Blue Pool' is via a two storey ashlar stone building which has a slate pitched roof believed to date from the mid-19th Century. This area houses a Kitchen that serves the Assembly Hall, a storage room and an 'old' plant room, much of the plant believed to be obsolete.

Generally, the existing structure of the 'Blue Pool' does not show any significant signs of degradation. There are no signs of foundation movement, masonry wall cracking or roof structure deterioration that would give cause for concern. The condition of the roof waterproofing would need to be assessed but this is outside the scope of this report.

Comments on Business Proposals to amalgamate the 'Blue Pool' with the Assembly Hall

- 1) Create Reception for the amalgamated building within the old 'Blue Pool'. The existing administration area would remain under the scheme but the changing rooms would be removed and new toilet facilities created. We believe that the existing changing rooms,

although constructed from concrete blockwork are non-loadbearing and thus could be removed without affecting the structure to create a larger Foyer with community area. Whether the changing room walls are non-loadingbearing would have to be confirmed by more intrusive investigation.

- 2) The existing plant room within the 'Blue Pool' could be stripped of existing plant and equipment and converted into Museum Storage without affecting the structure of the building.
- 3) The existing Fitness Suite could be changed into a Museum without affecting the structure of the building.
- 4) As the proposal to amalgamate the Assembly Hall with the 'Blue Pool' would require a link through the older two storey ashlar stone building between the two, new openings would be required through this structure. The plans that we have seen in a document produced by the 'Friends of Melksham Assembly Hall' indicate what is thought to be an existing passageway close to the existing 'Blue Pool' plant room. However, there is, we believe a wider infilled opening between the existing Foyer and link Kitchen that could be opened up without significant structural input. This would require re-location of the existing Kitchen so would need consideration.
- 5) Potential use of the existing swimming pool area has not been defined as part of the amalgamation but by infilling the pool itself with a suspended floor built off piers or 'sleeper' walls from the base of the pool would provide a significant area with minimal structural input.

Conclusion

Structurally, the old 'Blue Pool' shows no sign of significant deterioration and should be able to be amalgamated into the Assembly Hall without major structural repairs or alterations being necessary. Further assessment of the existing roof waterproofing would be required to determine current condition and likely timescale for repair or replacement. Modifications to the existing building are obviously required to achieve the proposals outlined in the document produced by the 'Friends of Melksham Assembly Hall' but none of these would have a detrimental effect on the structure of the building or require major structural changes.

References

- Regarding the Acquisition of the Blue Pool by Melksham Town Council – as presented by members of the Friends of Melksham Assembly Hall.
- Building Survey of Melksham Assembly Hall, Market Place, Melksham – Robson Building Surveying Ltd

APPENDIX A – Site Photos



Roof structure above suspended ceiling in Foyer



Roof structure above the Swimming Pool



Eaves beam on steel columns supporting Lattice Roof trusses above the Swimming Pool



Roof structure above the Fitness Suite



Location in existing Foyer of infilled opening to the Assembly Hall



Existing Foyer with suspended ceiling