

Our Ref: 14084.3.RevA/ADW/JW

Ludlow Construction
Livery Road
Salisbury
SP5 1RJ

Dear Jake,

RE: 47 BLUE BOAR ROW, SALISBURY
PROPOSED STRUCTURAL REPAIR WORKS TO THE EXISTING FABRIC FOR PHASE 2
WORKS TO ACCOMPANY A FULL PLANNING AND L.B.C APPLICATION

This assessment deals with the northern side of the site extending from the middle of the site northwards as indicated on the attached sketch and the planning drawing "Proposed floor plans" 1628/01 rev A prepared by Planning and Design on behalf of Ludlow Construction.

Phase 1 was subject to a full planning application and has been considered separately.

This report should be read in conjunction with the Heritage assessment for the building fabric.

CORE AREA (read with sketch drawings 14084.2.R1 to R3 and repair details D01-D04)

The central core area of the building is a complex area with multiple level changes. The proposed conversion will see accommodation spread across a number of different levels.

This core area is believed to date 17C, although has been much altered over the years; much of the remaining valuable historic fabric exists in this area. Sadly, poor maintenance of the roof finishes, gutter and downpipes etc has allowed significant water ingress through the historic fabric resulting in loss and degradation of that fabric.

Ground Floor

The area is bounded by brickwork walls in the main, all of which appear generally sound. The exception to this is the main chimney stack where the base of the stack has partially collapsed and been subsequently dead shored. This brickwork will need locally re-building.

Down-stand timber beams support the floor joists to first floor and these, generally, appear sound. There are, however, several locations where water ingress has caused decay and, in these locations, like for like replacement will be employed. Inevitably boarding will also need replacement in these areas.

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Towards the northern end of the ground floor, beams and posts support the floor joists above and these, typically, are in good order and will be retained.

A new stair opening will be formed in the rear bay of Unit 3 which will involve some trimming of existing joists with the existing very steep stair being removed and the floor infilled. New structure will allow removal of the existing post.

The northern wall to the building is unstable and currently dead shored and propped by a timbers, steelwork and scaffold; this has been in-situ for many years with water penetrating through the fabric from above. Existing floor joists are all wet and decayed and need replacement or augmentation. The wall itself will need extensive remedial work at ground level and fully re-building above.

First Floor

At the southern end, in the centre of the plan, water has been penetrating through the roof above and ceiling beams and joints are saturated and decayed. These will need replacement. The western side of the floor extends over the side alley at ground level and comprises beams, joists and boarding all of which appear sound. The western wall is of studwork from which timber panelling has been removed; it is proposed that this will be re-instated. The northern external wall to this room is saturated with resulting decay to beam and joist ends; some structural repair will be required.

The eastern room has suffered from water ingress on both its eastern and northern walls leading to decay of the floor joists over and the northern end of the main floor beam. The floor and eastern walls are currently propped by scaffold. The wall, which comprises timber with infill brick panels, will need some repair and replacement of decayed timber elements, whilst the floor joists above will, without doubt, need end repair or augmentation and improved tying into the external wall. The wall, as noted above, is single skin and will need to be dry – lined and insulated as part of the conversion process. These works might, in some areas, be mitigated by using new internal lining walls to support the existing joist ends to avoid replacement of joists.

The northern wall is saturated, and all the wall elements are totally decayed and beyond repair. The whole wall and roof valley area above will need to be replaced with new timber structure.

To the north, the area housing a bedroom, is a half level higher. The leaking valley along the south side of this area has resulted in loss of the wall structure, as noted above, and the common rafters to the roof are decayed and the beam ends supporting the floor structure may also need repair.

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The northern brick outer wall has partially collapsed, and the beam bearings are decayed. The wall and beams are currently dead-propped: the wall will need rebuilding and the beam ends strengthening.

The roof fabric has not been adequately maintained for many years, as a result of which, there has been widespread water penetration resulting in decay and partial collapse of the fabric. This is particularly so on the northern side where the roof edge and wall below has partially failed and now relies on scaffold for support. Most timber elements in this area are saturated and decayed and, as a result will need replacement. The north wall has partially collapsed and will need to be re-built incorporating new lintels.

The roof structure over this space comprises a pair of trusses supporting purlins and cut roof. The timbers at the north wall are decayed and need replacement whilst the purlin ends to both east and west walls will need strengthening. On the southern valley line, the lower rafter slope will need replacing and all the valley gutter will need re-boarding.

The attic space to Unit 2 is accessed via a circular stair shaft, containing a timber spiral stair, originally extending from ground to second floor level, the lower storey of which was removed in earlier conversion work. This stair has partially collapsed and is decayed in parts and, as a result, is unsafe: the stair will need to be re-built replacing defective elements.

From first to second floor levels the stair enclosure has racked to the west in tandem with the main roof above and stair enclosure to the west. The enclosure will need to be carefully repaired to ensure its structural integrity, but it is intended to leave the current distortion and alignment unaltered.

The attic roof is perhaps the most complete section of the original fabric but again, as elsewhere, poor maintenance and leaking gutters and valleys has led to widespread decay of common rafters, wall plates and gutter boarding. On the north side all the common rafters below purlin level, need replacing or augmenting.

The floor levels vary significantly, and the joists and boarding are in variable condition. It is, however, proposed to retain the structure and the boarding although modern joists will be laid level in the area of the new en-suite.

The roof comprises a pair of trusses spanning N-S with purlins running east-west. The roof was originally constructed without bracing, as a result of which, over time, the roof has progressively "racked" to the west by more than 600mm at ridge compared with eaves. At some stage, crude steel/iron tie rods were installed in the western bay to restrain this movement and simple, re-used diagonal timbers added. The purlin ends also show decay. The extent of damage and movement here are extensive but even so the proposal is to retain the roof in its current posture and improve its bracing system to stabilise it for the future.

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TWO STOREY REAR BUILDING: (read with sketch drawings 14084.2.R4&R5)

This building is believed to date from late 18thc and is a rectangular two-storey building with pitched roof with plain clay tile finish.

The ground floor is of solid ground bearing construction comprising a mix of brick pavements and rough concrete; the floor is uneven and in variable condition.

The first floor comprises deep timber floor joists spanning across the building with boarded floor. The joists are generally in good order but some exhibit decay at the external wall line and many floorboards are in poor order due to water penetration from above.

The roof comprises timber trusses set at regular centres down the length of the building supporting purlins and common rafters and clay tiled roof finish. There is a large hole in the eastern roof slope with no tiling or weather protection allowing water penetration over a large part of the first-floor area.

The external walls are of single skin brick construction at ground floor and timber framing with brick infill from first floor to eaves level. The lower brickwork is in very poor condition with many eroded bricks and loss of pointing.

Repairs to the fabric are likely to be extensive and intrusive by nature and a balance will need to be struck between the historic value of the building versus the economic cost of repairing the external envelope and putting the building back into use.

Condition

The building is generally in poor structural condition. It is of very light constructional form and has been both disused and neglected over a long period of time with extensive long term water ingress through the roof finishes and general deterioration of all the structural fabric.

The roof tiles have been lost on the centre of the south slope allowing water ingress over a long period of time which has allowed all the adjacent timber to become saturated. There is no 'felt' to the roof and battens are undersized. The hip timbers also show decay in the roof corners.

The three primary trusses are supported on a 100mm thick outer wall comprising timber stud framing with brick infill wall panels. The walls have moved outwards at their head, on both long elevations, due to roof spread. *The timber framing is in poor order with widespread decay of the vertical timber studs in evidence – significant repair is likely to be needed if the external envelope is to be retained. Repair of timber elements would undoubtedly result in the need to remove the half-brick infill panels.* Which would essentially be removing much of the upper storey of the building.

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The water ingress has saturated around 50% of the first-floor timber boarding and joists along the east wall are decayed, both in the floor span and at their bearings.

At ground floor level the perimeter wall is only one brick solid construction and brick buttressing has been added, at some time, to the eastern elevation. The brickwork condition is varied with some sections in very poor order and nearly all in need of re-pointing. The western boundary wall, in particular, is in parlous condition: *rebuilding of quite a large section is likely to be required.*

The existing ground floor construction comprises a mix of brick pavements and uneven, rough concrete, all in generally poor condition. This whole floor will need to be lifted and replaced with a new concrete ground slab, insulation, screed and appropriate finishes.

The structure, as a whole, is in very poor order indeed, is of low build quality and apparently of very little historic merit. Any scheme to retain the existing fabric would need additional structure to give the necessary structural robustness and would be likely to involve installation of additional lining walls, insulation and re-roofing. Given the scale of this intervention and the poor condition of all the extant fabric, it really would make sense to re-build the whole building utilizing, where possible, the existing materials.

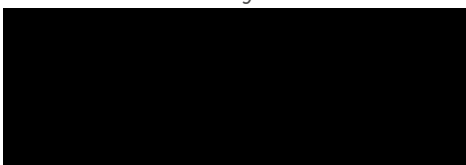
In conclusion, this low-quality building of low historical merit is in very poor condition and to return it to use would require significant re-building and extensive repair work as well as upgrading nearly every aspect of the structural fabric. As a result, it is proposed that the appropriate way forward is to reconstruct the building to meet modern standards.

OVERALL CONCLUSION

This phase of work involves a very complex set of historic buildings which have evolved over many years. The buildings have multiple levels and interfaces, all within a contained site which makes work more complex. Sadly, the buildings have been very poorly maintained over a long period of time resulting in water penetration through significant parts of the building fabric leading to widespread decay and instability.

The central core of the building is the oldest section with the most intact historic fabric to be repaired and the proposal is to sympathetically repair the historic fabric. However, the rear building is of low value and judged to be beyond economic repair and the proposal is, therefore, to re-build it utilising salvaged materials where possible.

Yours sincerely



**ANDREW WARING - BTech Eng CEng MICE MStructE
Consultant**

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