Guidance for Historic Buildings

Guide No. 5. Condition surveys

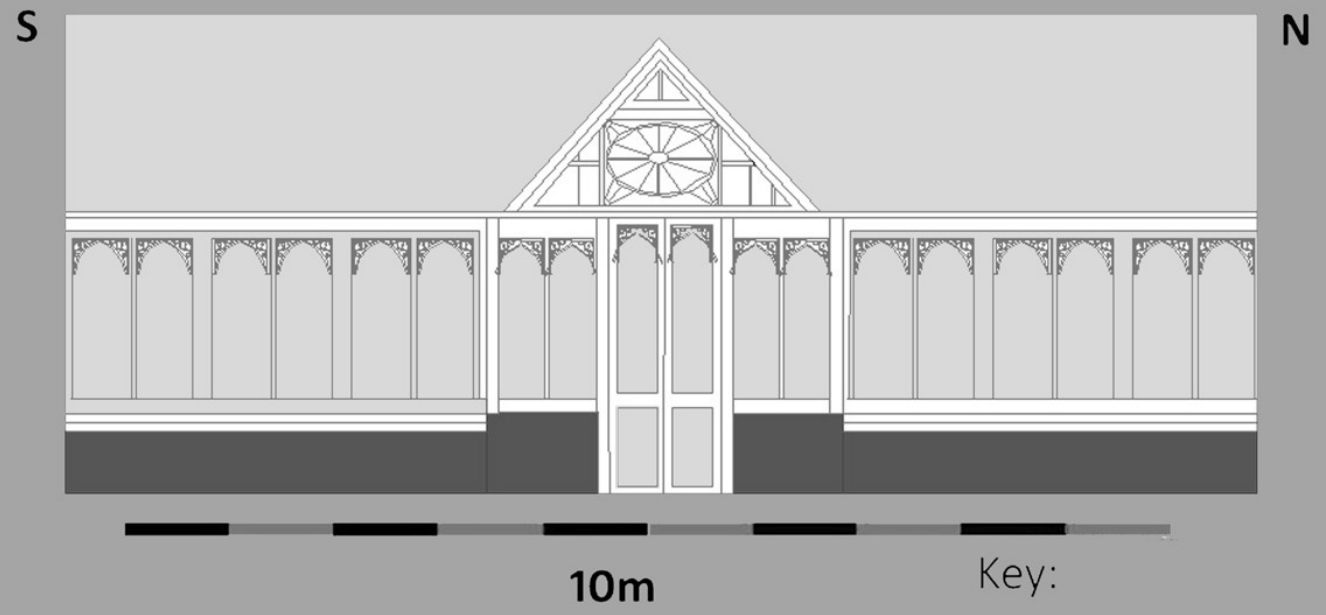

Table 1: Condition Survey

Wall and location:	Assessment:	View (all scales 2m and 1m):
Wall 1 (E-W axial)	The axial wall which divides the two kilns is in better condition and is plumb up to 1.8 - 2.0 metres in height. The coursing is fairly level in the centre, with a slight drop in the SW corner and the SE corner. Wall 8 to the east is not bonded into Wall 1 and has bowed.	Plate 8. North face of Wall 1. 

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Guide No. 5: Condition Surveys.

The process of understanding a building could begin with some basic observations by non-professionals which will provide an initial record and overview of the building. First it is important to label the rooms at an early stage (Fig.1), so everyone knows which room is being referred to. If names are not the preferred route, then simple letters and numbers could be employed, with G = ground floor; F = first floor; R = roof, and B = basement, followed by numbers allocated to each room.

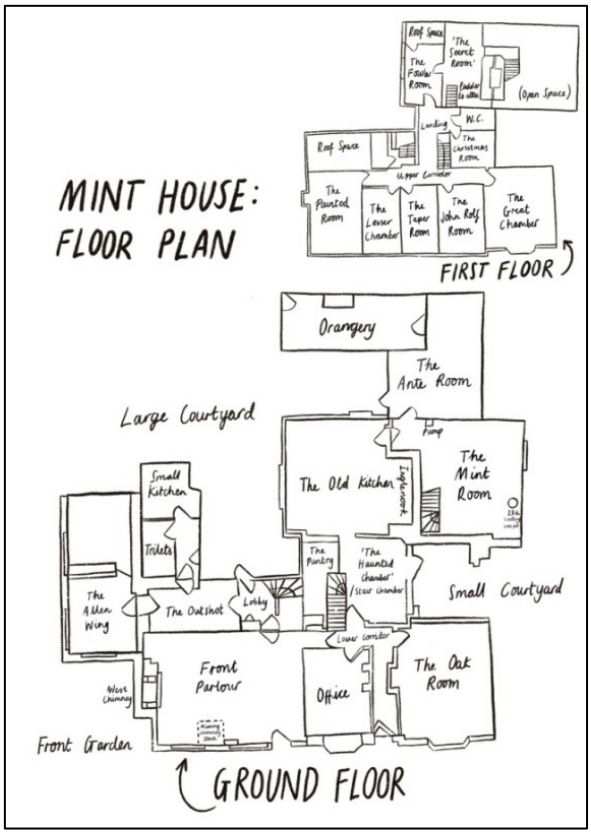


Fig.1.Simple names and labels should be assigned in a clearly illustrated format for all to use.

A health and safety risk assessment should be completed for any fieldwork activity in advance, particularly for any work taking place above 1.2m in height if working on external elevations and within the roof space of a building which may pose significant risk of injury.

The resulting document can utilize a traffic light system (Fig.2) so that dangerous tasks can be instantly noted or a more basic form can be initiated (Fig.3) which can be fleshed out in due course. More information on managing risk can be found on the Health and Safety Executive website at: www.hse.gov.uk/simple-health-safety/risk/.

Risk identification			**Risk assessment**				**e**		
Reference	Identified by	Risk	% probability	Impact	Level	Action plan	Risk owner	Programme/time	Strategy

Fig.2. Risk assessment for building works using traffic light system.

Company name: **Date of next review:**			**Assessment carried out by:** **Date assessment was carried out:**			
What are the hazards?	Who might be harmed and how?	What are you already doing to control the risks?	What further action do you need to take to control the risks?	Who needs to carry out the action?	When is the action needed by?	Done

Fig.3. Risk Assessment template (Health and Safety Executive 2019).

It is essential to consider the impact that repair work may have on historic fabric at an early stage; Heritage Statements can be used at the conceptual stage of a proposal, and refined along the way feeding into final decisions regarding conservation/design of proposed alterations (see Fact Sheet No. 2).

Measured sketch drawings can also be undertaken by non-professionals (see Fact Sheet No. 1) as well as photographic recording (see Fact Sheet No. 2). A Buildings Archaeologist will also need to be employed to undertake a full Archaeological Interpretive Survey (AIS) at an early stage.

Once the AIS has been produced, it is recommended that contact is made with the Local Planning Authority's Conservation Officer with a copy of the AIS made available to them, in order to start working on an agreed schedule for the initial assessment and preparation for conservation work to begin. This will include looking at the reasons for deterioration and neglect.

Once the building is better understood, it is imperative to know why it has become a liability in terms of how the deterioration has occurred, through the production of a Condition Survey. Professionals such as a Conservation Architect and a Structural Engineer will need to be employed for these steps, often aided by the Buildings Archaeologist. It is important to pull together such an experienced team to first understand the building and its needs. The Condition Survey will feed directly into a Repair Schedule and resulting Conservation Management Plan.

Condition Surveys are usually written notes accompanied by photographs which vary between practices. The building is inspected in detail to identify problems, to understand the cause of the failures and to make a record of them in an easily digestible format with reference to priorities i.e. urgent, moderately urgently or non-urgent. These can be linked to areas of significance by the use of 'traffic light' columns, where red denotes urgent repairs as well as highly significant fabric. The assessment can be quickly undertaken and produced as a colour-coded overlay (Fig.4). This gives an immediate feel for how vulnerable the building is and may include the condition of the walls, their plumbness and whether they are still structurally viable, as well as looking at any subsidence issues above and below the line of measurement.

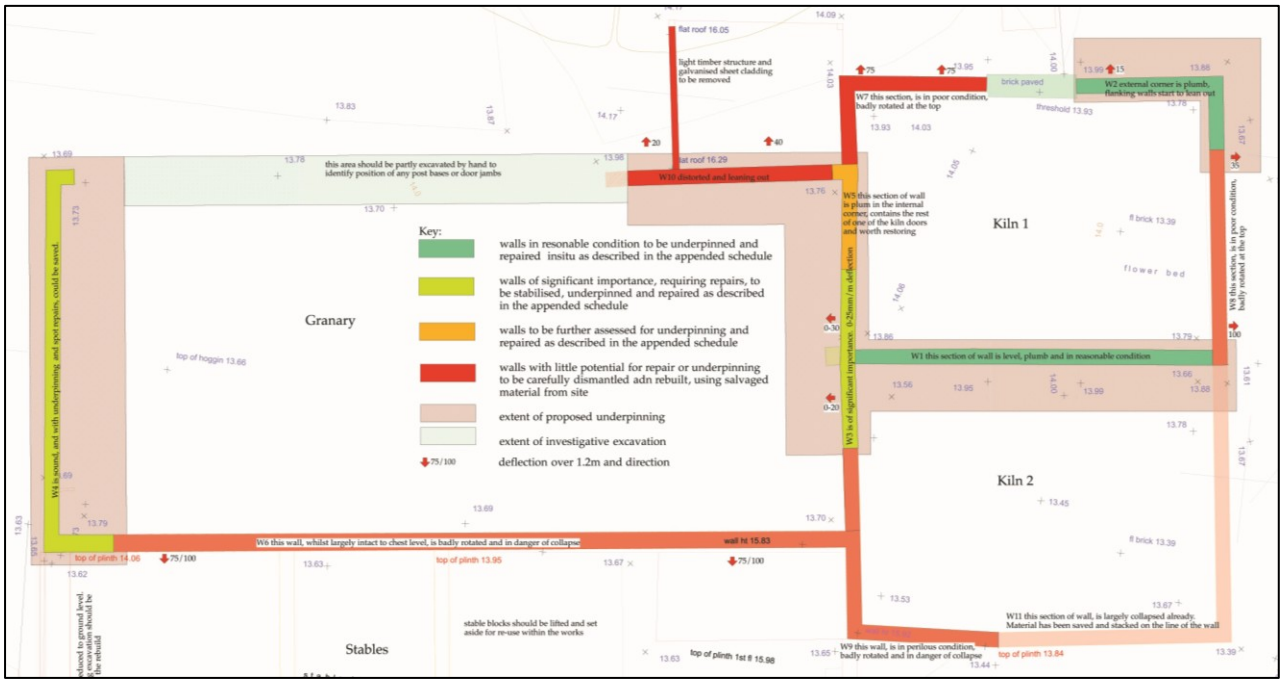


Fig.4. Colour coded ground floor plan included in a condition assessment reproduced courtesy of Peter Hulbert.

Traffic light coding can also be used for cross sections and elevation drawings with Architect drawings drawn at an acceptable level of detail for this work so fully detailed archaeological drawings are not necessary. The beauty of CAD programmes is the ease in which lines can be coloured (Fig.5), once the drawings have been produced.

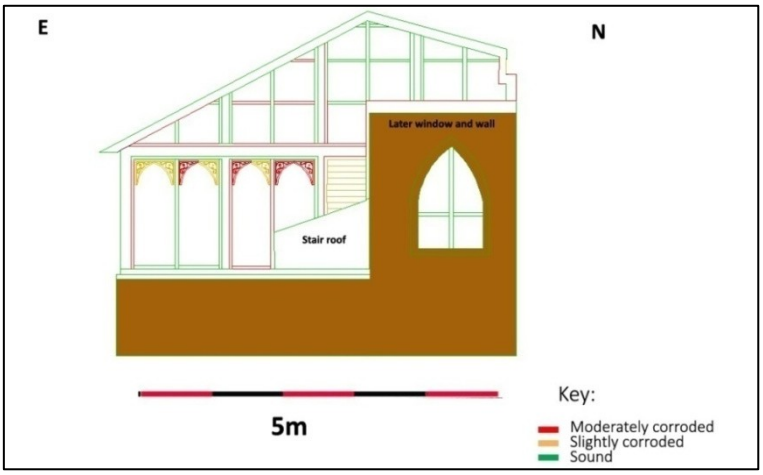
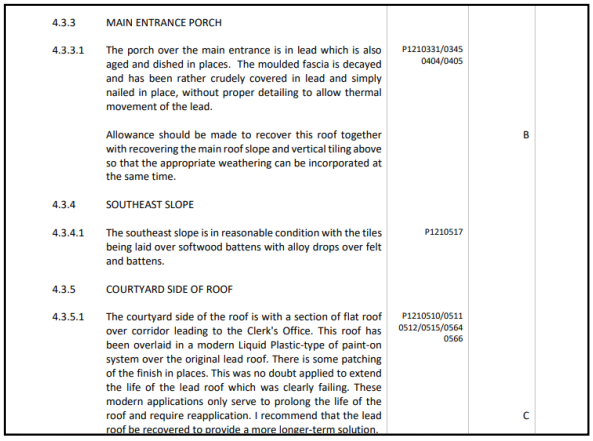


Fig.5. Colour coded elevation drawing of a glasshouse with partial brick walls.

Written reports may be lengthy documents containing photographs in sections broken down by items or features; floor levels; exterior/interiors and contain the important condition assessment. These come in a variety of forms; Fig.6 details the item on the left, with a reference column for photographs in an appendix and a useful condition rating in the right-hand column, expressed as an alphabetical figure as follows:

A = Urgent;
B = needs attention within 12-24 months;
C = needs attention within a 5 year period;
D = needs attention beyond a 5 year period;
E = desirable improvement with no timescale applied and finally
M = routine items of maintenance.



4.3.3	MAIN ENTRANCE PORCH		
4.3.3.1	The porch over the main entrance is in lead which is also aged and dished in places. The moulded fascia is decayed and has been rather crudely covered in lead and simply nailed in place, without proper detailing to allow thermal movement of the lead.	P1210331/0345 0404/0405	
	Allowance should be made to recover this roof together with recovering the main roof slope and vertical tiling above so that the appropriate weathering can be incorporated at the same time.		B
4.3.4	SOUTHEAST SLOPE		
4.3.4.1	The southeast slope is in reasonable condition with the tiles being laid over softwood battens with alloy drops over felt and battens.	P1210517	
4.3.5	COURTYARD SIDE OF ROOF		
4.3.5.1	The courtyard side of the roof is with a section of flat roof over corridor leading to the Clerk's Office. This roof has been overlaid in a modern Liquid Plastic-type of paint-on system over the original lead roof. There is some patching of the finish in places. This was no doubt applied to extend the life of the lead roof which was clearly failing. These modern applications only serve to prolong the life of the roof and require reapplication. I recommend that the lead roof be recovered to provide a more longer-term solution.	P1210510/0511 0512/0515/0564 0566	C

Fig.6. Example of items from a Conservation Architect's Condition Assessment (Anderson 2019).

Alternative ways to express this can be found in the British Standards description (Fig.7), as follows:

- D1 IMMEDIATE - Defects that are serious and/or need to be repaired, replaced or investigated urgently.
- D2 URGENT - Defects that need repairing or replacing but are not considered to be either serious or urgent (within 2 years)
- D3 NECESSARY - Defects that should be planned, and may be integrated into other work (within 5 years).
- D4 DESIRABLE - No major defect, but might improve the functioning or performance of the building. Could be capital expenditure (long term benefit).

IMMEDIATE & URGENT :	Condition Rating D1 & D2 (within two years)
2.02.01 External repairs	
Minor roof repairs: re-fixing of slates	Provisional cost:
Brickwork repairs to chimneys	Provisional cost:
Flashing repairs to chimneys	Provisional cost:
Structural stabilization of NE corner at roof level	Provisional cost:
Ease, adjust, and reseal window frames in brickwork reveals	Provisional cost:
	Total cost:

Fig.7. Example of British Standards BS7913:2013 condition rating.

An alternative approach may be to allocate the photograph as an *aide memoir* next to a brief assessment of the condition of the item (Fig.8), with a traffic coded list of priority repairs established, where urgent repairs are coloured red, less urgent repairs are coloured orange and non-urgent work is coloured green.

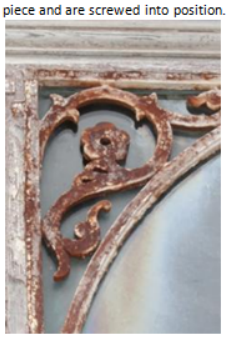
Feature:	Condition:	Cause:	Remedy:	Expected lifespan of repairs:
1. Window braces The have been cast in one piece and are screwed into position. 	There are areas of differential corrosion with paint flaking causing water penetration.When compared to areas which haven't corroded, there has been an approximate loss of 5% . The bracket screws are also corroded. There does not seem to be any evidence of significant layers of older paint and it is likely they have been previously stripped and painted.	Water dripping from the top of the wooden window frame.	Testing is needed to find the best way to strip the existing paint. Ideally, different types of paint should then be tested and left to weather for a few months to test if adhesion is suitable.	10-20 years+ dependent on successful adhesion and weather conditions.

Fig.8. Alternative way of presenting a Condition Survey.

Services will also be inspected but specialists will be needed such as qualified gas and electrical engineers. Environmental factors such as timber and damp defects should be discussed alongside thermal efficiency, and advice regarding Listed Building Consent, asbestos removal, and Planning Fire and Building Regulations should be offered. A summary of repairs should then be provided (Fig.9), listing the necessary repairs in a basic format with an assessment of urgency which forms a backdrop to a Repair Schedule.

SUMMARY OF REPAIRS

A	**URGENT, REQUIRING IMMEDIATE ATTENTION**
1	Remove broken tiles from gutters around chimneystacks
2	Replace slipped and otherwise defective roof and vertical tiles
3	Remove rusting fixings to rainwater pipework and replace with non-ferrous fixings
4	Clear blocked rainwater gullies
5	Remove metal from exterior walls causing damage to adjacent brickwork
6	Replace broken glass to window W4 by specialist
7	Repair/replace broken casement stay to window W26
8	Plaster repairs to Parish Office ceiling
9	Repairs to internal walls in Parish Room and remove of plant growth
10	Check asbestos report/update report regarding ceiling lining in cellar. Reinstate fire-proofing in conjunction with any structural/beetle eradication work
11	Remove weeds/vegetation from external steps, paths, etc.

Fig.9. Example of a priority list of remedial action to be taken (Anderson 2019).

Often there may be some degree of overlap between the Architect, the Structural Engineer and the Archaeologist. A Structural Engineer's report (Fig.10) will be less likely to discover historic phasing and background, focussing on the defects seen. This is often achieved through visual inspection with the Architect, with a resulting written report similar in format to the Architect's.

By far the most significant issue from a structural point of view, is the amount of erosion suffered by areas of the masonry, particularly the sandstone blocks. This was referred to within my 2006 report and has not been addressed since that time. There is no doubt that erosion has progressed during the last 13 years.

Stone erosion to North East elevation at low-level

Fig.10. Example of a Structural Engineer's Condition Survey (Bunney 2019).