

Condition Reports

East Herts District Council

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1. Executive Summary

This summary is qualified by the remainder of the report and the accompanying reports on the building fabric and MEPH services (in the appendices), which should be read and construed as a whole.

The client wishes to know the general condition of Water Lane Hall including the extent of recommended repair and replacement works. AECOM's multi-disciplinary team have undertaken visual inspections of the building structure, fabric and mechanical, electrical and public health (MEPH) services.

Access to most of the rooms within the building was made available by the church elder, which enabled visual inspection of the internal spaces. The areas where access was not possible are:

- i) The central and eastern portion of the roof space above the hall, and close inspection of the water tanks to the west portion of the roof,
- ii) The roof spaces within the six gable dormer rooflets above the hall on the north and south elevations,
- iii) The roof space above the ceiling hatch to the 'parlour' room at first floor (east),
- iv) The roof space above the ceiling hatch to the office room at first floor (southeast)

Building Structure Summary

Overall, the principal loadbearing structure of Water Lane Hall appears to be doing well for its age, particularly given that it has been exposed to prolonged water ingress together with partially unheated internal spaces. However the suspected ground subsidence over the full footprint of the building is a concern due to the range of evident associated defects to the building façade(s) and internal finishes. Anything which substantially disturbs the balance between the ground and the structure can promote new settlement. These can commonly include ground-specific causes including frost heave, changing water-tables, leaking drains, droughts, ground settlement from previous filling, and actions from nearby trees.

The most probable causes may be determined by a process of elimination. If symptoms are consistent with ground movement as well as other causes, further investigations must be made to distinguish between them, including trial-pits, boreholes, drain testing, and movement monitoring over a cycle of four seasons. The principles of repair to arrest progressive movement may need to include foundation strengthening, such as underpinning.

A timber specialist should be engaged. The extent of timber decay should be identified, and a plan of action put in place to remove any decaying timber and treat the areas where wet rot and/or dry rot is present to halt its spread. Part of this process will be to stop the source of water within the buildings and to allow appropriate ventilation to begin to dry the structure. The first step will be to prevent further rainwater penetration from above, this will be solved by way of the works to the roof coverings, chimneys and rainwater goods. Attention can then be turned to the masonry walls which may still contain moisture.

Building Fabric Summary

The pitched roof coverings appear to be beyond their serviceable life and the flat roof coverings appear to be nearing the end of their life cycle. The external masonry walls evidence localised areas of spalling, deterioration and cracking. The internal fabric is generally aged and worn throughout, with significant water damage and cracking to various locations of the internal linings.

Refer to the Building Surveying report for a full description of condition, together with recommendations for short, medium and long term.

Building Services Summary

The following provides a general summary of the observations:

- There are currently no operating and maintenance manuals available or record drawings or test certificates.
- The gas meter room is not sufficiently ventilated. Ventilation should be at least 3% of the meter room floor area.
- The main gas pipe is routed through the main hall. Although this is not a compliance issue, the pipe could be liable to accidental damage.

- Electrical Installation A full EICR inspection by a qualified electrician should be carried out as there is no history on site of the installation being recently tested.
- Drainage from the toilet sinks and basins is very slow, and this may be the result of the drainage system being blocked or not adequately vented.
- Emergency lighting duration or levels not checked, a duration test and level check should be carried out.
- Most of the luminaires are either fitted with fluorescent or incandescent lamps, these should be replaced with LED versions to make the site more energy efficient. A number of luminaires are also not working or damaged.
- No fire detection or alarm system is installed.
- Both male and female toilets are tired and in need of an upgrade.
- The heating system boiler was working, but it is not known if the heating system has the ability to cope with temperatures close to or below freezing. The boiler is in the region of 20 years old and should be replaced.
- The hot water boiler in the kitchen is non-functioning.

An initial Energy Performance Certification (EPC) assessment has been carried out carried out for the existing hall using Integrated Environment Software's Virtual Environment approved dynamic simulation modelling software. Refer to the MEP report for full details of the EPC Assessment.

1.1 Introduction and Clients Brief

- 1.1.1 AECOM are instructed by East Herts Council to carry out condition assessments of the existing United Reformed Church Hall (aka; Water Lane Hall), which is located on Water Lane in Bishops Stortford. This report describes the following scope of services:
 - Structural visual inspection of the building and report Inspecting the safe, accessible areas of the hall roof space, floors and internal and external walls, as described in Section 1.3.
 - Building fabric visual inspection and report (Appendix B).
 - Mechanical, electrical and public health (MEPH) visual inspections and report (Appendix C).
 - Provision of a below ground drainage CCTV survey specification, including statutory record requests from Thames Water (Appendix D).
 - Unmanned Aerial Vehicle (UAV) drone survey and provision of aerial orthophotos for the purposes of this
 report.
 - Geomatic surveys, including a site topographical survey and specific verticality and spot level surveys (Appendix E).
 - Cost management services. Provision of a rough order of cost report. (Appendix F)
- 1.1.2 AECOM were instructed to perform Stage 1 visual structural survey, whereby a second stage assessment is generally reserved for physical investigations to determine the structural format of hidden parts of the building and latent defects.
- 1.1.3 AECOMs inspections, undertaken on 26th and 27th February 2025 were attended by AECOM. The surveys were based on a visual assessment of the parts of the property that were deemed safe to access through the completion of Safety, Health and Environment (SH&E) based risk assessments.
- 1.1.4 The purpose of this report is to provide a summary of observations and recommendations regarding the present condition of the structure and fabric of the building, including the mechanical, electrical (M&E), and public health utilities including below ground drainage. The observations in Section 3 highlight the visible defects or suspected latent defects. Preliminary priorities are assigned to each defect, so that approximate timelines for the repairs can be readily appreciated.
- 1.1.5 Selected photographs taken during the inspection are provided in Appendix A (structure), Appendix B (building fabric) and Appendix C (MEPH), and they illustrate areas of the key defects highlighted in the report. The existing key plans are located in Section 2. AECOM have not seen any other record drawings of the building apart from extracts from floor plans in the various reports listed in Section 1.6.

1.2 Weather

1.2.1 The weather during the survey on 26th February was mild, windy with frequent heavy rain. On 27th February it was cold and sunny.

1.3 Definition of Survey

1.3.1 A Visual Structural Survey comprises a visual inspection, with the naked eye and binoculars where appropriate, of those parts of the structure that can be seen from safe, readily accessible vantage points. The detection and eradication of timber infestation and damp are specialist matters and although mention may be made in this report, it is recommended that a suitably qualified company be employed to carry out an independent survey and report.

1.4 Limitations

- 1.4.1 Due to the nature of the survey being visual-only we did not inspect any inaccessible, covered, or unexposed parts of the structure. We will therefore not be able to report on the structural composition or condition of such areas at this stage. We have not undertaken any opening-up, material testing or carried out appraisals of the existing construction by measurement or calculation. The property was vacant at the time of the inspection.
- 1.4.2 Our report is based on the available visual evidence together with our previous experience of similar structures, and the information provided by others. We have reported on structural defects and conditions that were reasonably detectable and visible at the time of our inspection that may materially affect the stability and safe use of the structure.
- 1.4.3 It must be appreciated that deterioration will occur and continue in certain areas of the structure where they are permanently exposed to the atmosphere; even where no obvious evidence of distress was visible at the time of our inspection.
- 1.4.4 AECOM cannot offer any guarantees that the structure will be free from developing future defects, or that existing non-structural defects which fall outside the scope of, and/or beyond the limitations and exclusions of this report, will not deteriorate in the future, hence leading to problems with the structure.
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1.5 Health and Safety

1.5.1 Prior to arrival on site, AECOM completed a risk assessment outlining the proposed methodology for accessing the building and carrying out work. Access within the hall roof space was limited to the western end bay adjoining the roof hatch, which had a boarded floor covering. The remaining floor to the attic space was comprised of a narrow timber boardwalk that was completely covered with loose-laid insulation at the time of the survey.

1.6 References

- Quinquennial Inspection of the URC Hall, by G E Sworder & Sons dated 29th August 2002
- Report for a Type 2 Standard Sampling Identification and Assessment Asbestos Survey of URC Hall. By ALS Limited, dated 10th January 2006
- Report upon the General Condition of the URC Hall, by Sworder Associates dated 9th April 2008
- Report on Structural Inspection of the URC Hall, by RCA Structures (ref: 17979), dated 4th October 2016
- Existing floor plans and elevations, by Lewis Patten dated June 2018
- Arboricultural Report (tree report for planning purposes) 190110-PD-11, by Tim Moya Associates, dated February 2019
- Historic Buildings Report, by the Bishop's Stortford Civic Federation, dated February 2022.

2. Building Description

The existing building known as the United Reformed Church (URC) Hall is located between Water Lane and Old River Lane in the north region of Bishops Stortford town centre. The building lies within the Bishop's Stortford Conservation Area. It is understood the building was constructed in circa 1914 as a purpose-built church hall, with various lateral extensions added in the 20th century. The original course of the River Stort lay due east of URC Hall, and it was culverted in the early 1970s to make way for the construction of Old River Lane.

For the purposes of the report the front (west) elevation is viewed from Water Lane, and the north elevation faces the Waitrose supermarket. Refer to Figure 3 for the general arrangements.

The URC Hall building is constructed of pitched cut timber roofs with plain clay tiled coverings, with several areas of flat roof between roof junctions. The original parts of URC Hall are built in unframed loadbearing masonry mainly formed in solid brick masonry with red facing bricks, except the west gable of the hall is built with yellow bricks.

The hall stage and its rear single-storey roof enclosure was built to the east of the hall around 1960. In 1969 a new steel framed (concrete encased) structure was built to the northeast of the hall to form a family room at first floor level. The steel frame enabled the room to be built over an undercroft allowing vehicles to access the private car park at the rear of the site accessed from Water Lane. Also in 1969 was an extension to the ground floor toilets. The roof to the modern family room is a flat roof constructed in timber (possibly framed with intermediate steel beams), arranged around cavity masonry walls onto the steel frame at first floor which supports an insitu concrete floor with retained formwork to its soffit using wood-wool. To the west are two main stairwells with hipped-end pitched roofs with two similar roofs to the east over the first floor meeting (parlour) room and the hall office.

The hall is arranged over a double-height internal space with a galleried balcony at first floor level overlooking the hall auditorium below. On the north and south elevations located each side of the central roof ridge and between the gable ends are three adjoining gabled dormer roof windows. Below the dormer windows are the flat roofs forming the ground level single-storey utility rooms. The roof structure to the hall is comprised of four large timber scissor trusses arranged over five bays between the gable ends of the building. The trusses are reinforced with steel circular tension rods. The lower truss chords including the concealed diagonal steel rods project below the ceiling to meet the external walls to the hall. There are two levels of horizontal timber collars bracing the main truss rafters. The upper collar is located within the roof space and the lower collar is partially visible below the hall ceiling. The roof trusses support four rows of timber purlins that in turn support the close timber boarding (sarking) carrying the roof coverings. Common rafters were not visible in the roof space. The ends of the roof trusses are supported by solid wall piers forming the primary wall envelope around the interior of the hall. The piers extend to ground floor level and are concealed behind continuous wooden cladding.

At the end bays of the roof void the purlins are supported onto the gable end brickwork via a combination of i) timber plates on metal brackets embedded in the brickwork and ii) timber plates embedded in the brickwork. At each gable end to the hall within the attic space are vertical ventilation slots in the brickwork. The attic floor is built traditionally with timber joists spanning between the lower collar forming the trusses (the timber connections are unknown). The underside of the hall ceiling appears to comprise of gloss painted close timber boarding assumed to be affixed to the underside of the joists. The floor construction to the gallery at first floor is timber beams and joists spanning between steel cantilevered beams that project through the main hall walls to form the column-free perimeter balcony structure. The construction of the solid balustrading to the gallery is assumed to be timber, which may incorporate concealed steel stiffening elements. The general arrangement of the roof structure is shown in Figure 4.

To the north of the hall and the site boundary wall with the adjoining supermarket carpark lies a row of five mature horse chestnut trees, and a mature ash tree at the extreme northeast corner of the URC Hall site. According to an arboricultural report dated 2019, the average recorded height of the horse chestnut trees was 11.5 metres with an average stem diameter of 80cm, and the ash tree was 18 metres high with a 70cm stem diameter. According to the tree report there were plans to reduce the crowns of the five horse chestnut trees back to the site boundary line mainly on the trees' south crown face; and plans to fell the ash tree. Whilst it appears some crown reduction work has been undertaken to the horse chestnuts, the ash tree still exists in the URC Hall car park.



Figure 1 - Aerial view of Water Lane Hall viewed from Old River Lane facing west (AECOM image)



Figure 2 - Aerial view of Water Lane Hall viewed from Water Lane facing east (AECOM image)

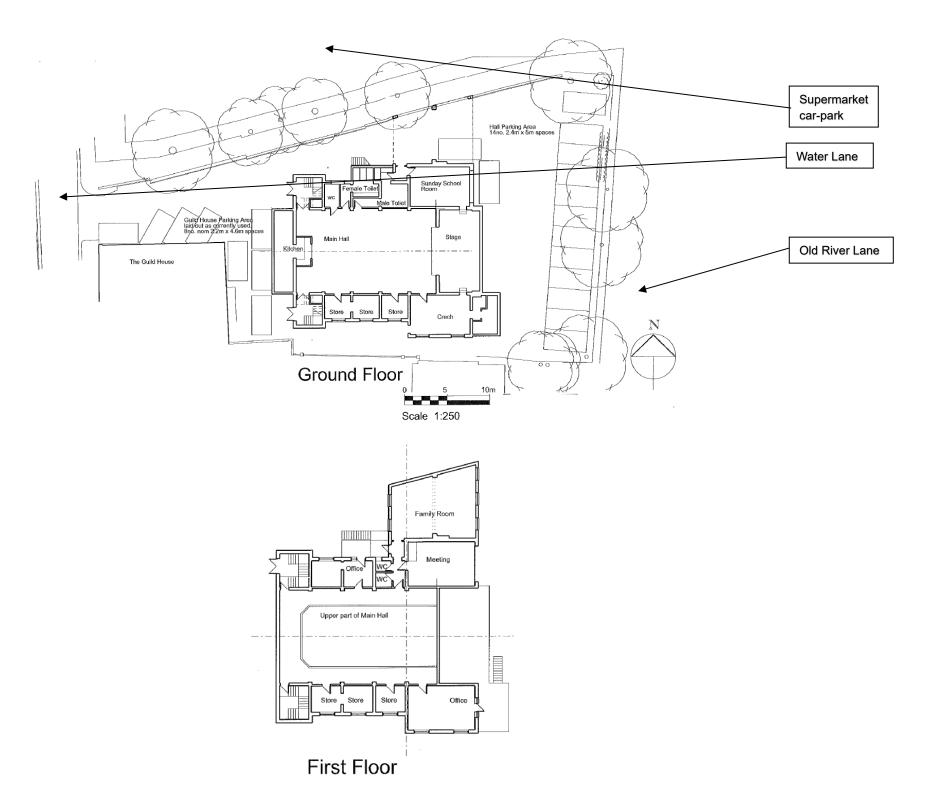
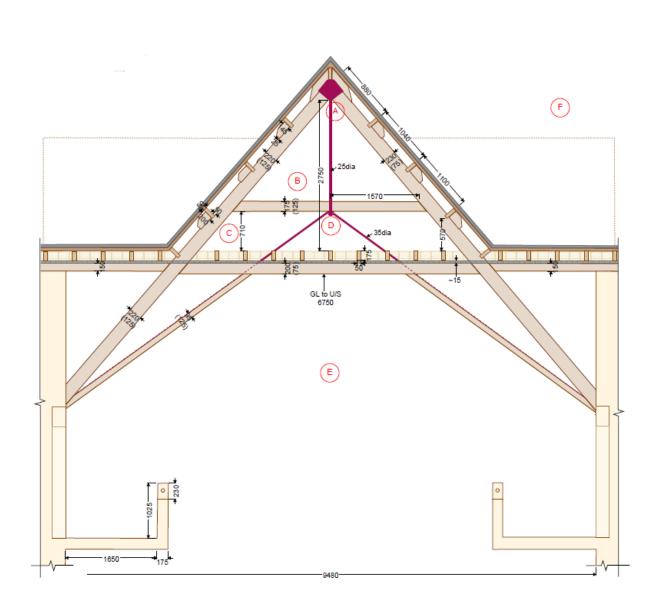
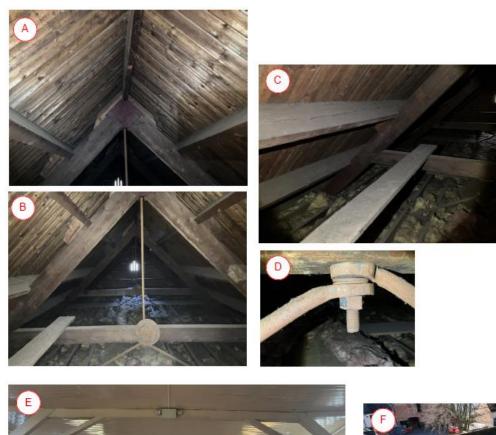


Figure 3 – Ground level and first floor general arrangements (Lewis Patten Architects)

Figure 4 – A typical section through the hall roof structure with key to photographs (AECOM)









3. Structural Observations

This section is to be read in conjunction with all other reports of 'condition' by the surveyors for the building fabric and the mechanical electrical and public health (MEPH) engineer. Read with the photographs all included in the Appendices.

The table below describes visible symptoms of structural distress of each notable defect related to the building structure. The table also describes the probable cause of each defect, where there is more than one probable cause or the cause is unclear, further investigations are specified for action in the second stage of the appraisal.

The principles of repair are given based on the likely outcome of any necessary further investigations. Preliminary priorities are assigned to each repair as follows:

- A Now
- B Within 12 months
- C Within 1-2 years
- D Within 2-10 years

The likely consequences of inaction are given in the table, which enables the gravity of the defect to be readily appreciated. Some of the recommended investigations include opening-up parts of the structure.

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
1.0	External roof areas			soligation,		
(1a)	Note: For a detailed assessment of the non-structural fabric of the building refer to the AECOM Building Surveying report in the Appendix. The following is only a general summary. 1. The main pitched roof coverings to the hall and side annexes are locally slipped, broken, shaled and missing tiles (evidenced by AECOM's drone images included in the appendixes). Possible missing, damaged or poor lead flashings at roof, wall and chimney junctions. This has caused water damage inside the attic spaces, evidenced by water ingress into the hall internal space. 2. Evident faulty rainwater goods, generally, which may be age expired and blocked. Heavy rainfall was encountered during the AECOM surveys, and key areas of the above (and below) ground drainage were visibly blocked and overflowing. 3. Areas of flat roof to the front (west), rear (east) and side (north and south) elevations to the hall. No access to the flat roofs apart from AECOM's drone images included in the appendixes. Roof felt coverings are age-worn with evident past patch repairs, surfaces partially covered in gravel chippings with moss growth and general debris. Water ponding on west flat roof over the kitchen. Condition, quality and performance of felt is not known. Flat roof at the rear which allows access to the first floor office is constructed in timber joists. The above defects are most likely to be responsible for the evident general water ingress problems into the building and resulting damp and deterioration to the building interior.	Most defects in roofs in the coverings and at roof to roof and wall interfaces are due to poor weatherproofing / flashing installations, wind damage and loosening of roof coverings. Blocked rainwater goods generally causing local build-up of organic material in guttering, causing further problems to the structure and fabric.	1. Physical access onto the main roof is not possible without means of scaffolding. Access inside the dormer roofs to the hall was not made due to confined space access. Refer to the AECOM condition surveys of the roof coverings for further advice. 2. All gutters and downpipes (including gulleys) should be investigated for defects. 3. Flat roof coverings and flashings on all the flat roof terraces are probably age-expired, therefore further investigations on the condition of the waterproofing coverings is considered unnecessary. However it may be necessary to examine the build-up of the flat roofs to assess whether other agents of decay are occurring, such as condensation. 4. If the flat roof at the rear is a dedicated fire escape route from the first-floor office, a structural engineer will need to check that the flat roof can safely carry the imposed load due to persons escaping the roof.	1. Any defective roof coverings, flashings and the rainwater goods should be repaired in the short term and later renewed if they form part of a wider scheme of refurbishment. A budget cost should include to remove the existing tiles, timber battens and roofing felt to the pitches roof areas. In the flat roofed areas the felt should be removed and the board substrate Prior to this, any roofing felt should be tested to ensure it does not contain asbestos as this can be the case for bituminous felts of this type and era. The covering should be renewed using a bituminous or Type 1F felt, new treated SW battens and natural Welsh slates (subject to planning approval). The inclusion of in-line slate ventilators should also be budgeted for, these will be required to ensure a suitable level of natural ventilation is achieved across the roof void, preventing condensation and subsequent timber decay. 2. The existing rainwater goods are to be cleaned and repaired in the short term. However, the rainwater goods need to be assessed by the project architect to check if they are appropriate to the building's historic status, and whether cast metal gutters and downpipes are needed as part of any new refurbishment.	 Ongoing water ingress and damage to the internal structure and fabric leading to further structural decay compromising the structural safety and loss of fabric. The guttering, hoppers and downpipes are generally blocked and damaged and loose slates can be seen in the guttering when viewed from ground level. This can also be dangerous to persons below and it needs repairing as a priority together with other roof repairs. Rainwater outlets block and cause rain to overtop finishes and damage fabric below. Piecemeal repairs will become uneconomic. 	A/B

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]				Investigation)		Priority
	External chimney stack (west elevation to hall). The stack	Age-expired cementitious flaunching to the chimney stack allowing water to	n/a	Refer to Building Surveyor's report for	Possible ongoing water ingress and	B/C
	is visible externally from the top of the flat roof above the	enter the building fabric through cracks.		recommended repairs to chimneys.	damage to the chimneys and internal	
	kitchen. The cement flaunching to the chimney is cracked,				structure and fabric leading to further	
	and the upper five brick courses to the stack are poorly	Staining to the brickwork is possibly leachate from the cement flaunching.		Defective parts of the chimneys should be re-	structural decay compromising the	
	weathered and stained, with organic growth. There are			pointed in a suitable hydraulic lime mortar to	structural safety and loss of fabric.	
	signs of possible deterioration of the brickwork bed and	Possible lack of ventilation to the chimney flues / stack.		maintain breathability of the masonry.	•	
	perpend joints. Staining from an overflow from a water tank	•				
	in the hall roof space.			The chimney pots may require new vented caps,		
	External chimney stack (south elevation to rear office)			a budget should allow for this, including local		
	room). The stack is approximately 2.4 metres high above			repairs to the flaunching.		
	the roof gutter line to the top of the mortar flaunching. There					
	are signs of possible deterioration of the brickwork bed and					
	perpend joints. The cement flaunching to the chimney is					
	cracked, and the upper five brick courses to the stack are					
	poorly weathered, cracked and stained, with organic					
	growth. The flashing detail between chimney and roof coverings					
	, , , , , , , , , , , , , , , , , , ,					
	appears to be below standard.					
2.0	External front elevation (west)					
	Ground Floor					
(2a)	Front entrance and (northwest) stair lobby	i) Possible ground subsidence due to faulty drains and / or action from	i) Investigate drains by conducting a below	i) If subsidence is the cause of the movement the	Subsidence is likely to be the cause. If	В
	i) External cracking to the brickwork at high level over the front	nearby trees. There is an evident problem with the below ground drainage	ground drainage CCTV survey. This is being	foundations in the location of the subsidence will	it is active subsidence, it will continue	_
Photos	entrance doors. The cracking propagates vertically and	in the adjoining hardstanding. The nearby gulley became flooded during	coordinated by AECOM between February-April	likely require underpinning for the extent shown	causing further cracks, water ingress	
EX-1, 2	diagonally above the bullseye window at first floor, with a	heavy rainfall in March 2025 whilst AECOM were surveying the building.		below, including transition underpinning into the	and loss of stability affecting the safety	
& 3	vertical crack at the base of the window (the cracking continues	Other evidence includes the settlement of the Tarmacadam hardstanding		hall gable wall (all as highlighted in blue).	of the building.	
	through the wall and pronounced cracks can be seen	where it abuts the walls to the building entrance.	ii) Carry out trial pitting of the foundations to the			
	internally).	Ĭ	wall on the west frontage and the north return	ii) Repair of the masonry cracks based on an		
	**		wall. Expose the existing foundations for	underpinning scheme would comprise of brick		
	ii) Despite widespread cracking internally within the stair lobby		structural inspection. Pending the results, a	stitching using stainless steel bars inserted into		
	walls, there doesn't appear to be any consequent adverse		more comprehensive specialist site ground	the bed joints (such as Helifx), specified by the		
	structural distress to the external (white painted) decorative		investigation is recommended, including a	structural engineer.		
	timber (Baroque-style) doorcase including pilasters, the half		desktop geotechnical study, and a minimum of	3		
	round window (fanlight) and masonry surroundings located		2No boreholes (window samples), and			
	above and each side of the entrance door.		associated laboratory soil sampling and testing			
	No apparent related structural damage externally to the		for soil type, tree root identification and analysis			
	adjoining (west) triangular gable end wall to the hall. However		and soil engineering properties. Ground water			
			The state of the s			

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
[DP1]	refer to table section relating to defects to the internal face of the west gable wall.		testing for leaking drains / water mains. Assessing the causes of the ground settlement in the rear (east) car park. Provision of a factual geotechnical report and interpretative engineering report on the condition of the ground at the site and its impact(s) on the existing Water Lane Hall building. iii) Touching distance checks are recommended to assess the integrity of the external decorative entablature, since vertical cracking in the internal face of the wall extends between the elliptical window and the half round window. iv) Establish movement monitoring: Install monitors (such as stainless steel studs) to various walls in this location to see if structural movement is progressive. It is recommended	iii) Allow provisional sum for repairs to the external entablature to south elevation frontage, including its fixity to the external wall.		Priority
			that this either be conducted by a local structural engineering company, or by a specialist geomatics company. Allow for monitoring this areas (and other areas highlighted in this report) for a minimum period of 12 months i.e. a cycle of four seasons. v) Refer to table section relating to defects to the internal face of the west gable wall.			
Photo EX-16	Single-storey extension (kitchen) Two vertical cracks in the rendered coverings on the front (west) elevation.	Possible thermal effects relating to the render and the backing masonry. The render mix may be too hard compared to the backing masonry, causing differential movement. The cracking could be a consequence of the suspected subsidence to the adjoining entrance lobby.	Monitor the cracking over a period of 12 months (see above). Check if mode of movement is lateral uniformly (thermal) or tapering (subsidence). If movement is progressive, allow for opening up the render to inspect the backing masonry.	,	Open cracks in external render coverings and brick masonry allows water (including wind driven rain) to enter the wall and cause damp penetration and consequential defects.	B/C
(2c) Photo EX-1	Southwest stair lobby wall i) External cracking to the brickwork at high level over the front entrance doors. The cracking propagates vertically and diagonally above the bullseye window at first floor, with a vertical crack at the head (and possibly at the base) of the window (the cracking continues through the wall and pronounced cracks can be seen internally).	i) Possible ground subsidence due to faulty drains and / or action from nearby trees. There is an evident problem with the below ground drainage in the adjoining hardstanding. The nearby gulley became flooded during heavy rainfall in March 2025 whilst AECOM were surveying the building. Other evidence includes blocked roof guttering allowing water to overspill and saturate the adjoining ground.	i) Investigate drains (see above for details) ii) Physical checks to assess the integrity of the external decorative entablature (see above for details) iii) Establish movement monitoring to check for progressive subsidence (see above for details) iv) Carry out trial pitting of the foundations. Expose the existing foundations for structural inspection. v) Refer to table section relating to defects to the internal face of the wall.	i) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown below, including transition underpinning into the hall gable wall (all as highlighted in blue).	Subsidence is likely to be the cause. If it is active subsidence, it will continue causing further cracks, water ingress and loss of stability affecting the safety of the building.	В

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	
[DP1]				ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the structural engineer. iii) Allow provisional sum for repairs to the external entablature to south elevation frontage, including its fixity to the external wall.		Priority
3.0	External rear elevation (east)					
	Family Room Weeking Upper part of Main Hall Store Store Store Office					
(3a)	Family room (modern extension over car park entrance) on east elevation	i) Blocked roof guttering and downpipes (refer to accompanying building surveying report for further advice).	Refer to accompanying building surveying report for any further advice.	Refer to accompanying building surveying report for any further advice.	Progressive ongoing water ingress and damage to the internal structure	
Photo EX-6	i) General water related damage to brickwork, including around windows ii) General water related damage to brickwork, including around windows				and fabric leading to further deterioration / decay compromising the structural safety through loss of fabric.	
(3b) Photo EX-6	Ground floor (Sunday school / meeting room) i) General cracking and spalling to painted rendered wall below and around window, with severe water saturation and staining at junction with the ground.	i) Blocked roof guttering and downpipes (refer to accompanying building surveying report for further advice). ii) There are evident problems with the below ground drainage in the car park area. Reports of bad smells from foul drainage has been reported in the warmer months in this area. It understood that the hardstanding at the rear elevation once housed an external toilet building (since removed and covered with a raised paved hardstanding). The height of the raised paving	Locally remove the render coverings to promote	Cement renders are known to promote dampness within solid masonry as rainwater which passes the render becomes trapped within the wall structure. This usually leads to the decay of the masonry itself along with the mortar, the internal finishes and leads to decay of the timbers bearing into or, in close contact with the walls. It is recommended that when a major	Progressive ongoing water ingress and damage to the internal structure and fabric leading to further deterioration / decay compromising the structural safety through loss of fabric.	

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]		bridges above the level of the damp proof course, which has allowed to penetrate the wall. iii) Defects exacerbated by the lack of vapour permeability of the cement-based render and their inability to deal with the normal movement and breathability of a solid masonry wall.	Refer to accompanying building surveying report for any further advice.	Investigation) scheme of refurbishment is undertaken, the cement render be removed, the walls consolidated with an imminently hydraulic lime mortar and then finished with a suitably designed lime render. This will be less prone to cracking and begin to allow the walls to dry through evaporation. Refer to accompanying building surveying report for further advice.		Priority
(3c) Photo EX-7	Rear and side elevations of hall stage (single-storey rear extension) i) General cracking and spalling to painted rendered wall below external wall chamfer with severe water staining at junction with the ground. ii) At high level (accessed from the rear external steel staircase), the south facing wall to the stage has cracked render. iii) External metal staircase – The finish to the steel staircases is corroding, causing deterioration of the paint finish.	See above comments for Sunday school / meeting room.	See above comments	See above comments. Subsidence of the stage rear wall is not evident. However given the significant subsidence movement to the adjoining workshop building, provide provisional sum allowance for underpinning for the extent shown below (all as highlighted in blue).	Progressive ongoing water ingress and damage to the internal structure and fabric leading to further deterioration / decay compromising the structural safety through loss of fabric.	B/C
Photo EX-8	Rear elevation of ground floor workshop (single-storey rear extension) i) General condition of the brickwork is adequate, however signs of water saturation to the brickwork at junction with the ground. ii) Refer to separate section on the south elevation of this rear extension, which identifies severe tilting of the building towards the rear car park with large cracks.	of the brickwork. Water splashing – possible lack of DPC. ii) Building subsidence due to faulty drains, and / or the backfilled waterway	i) It needs to be established if the cracking and water penetration at the eastern side is related to ground movement. Investigate the cracks, including other cracks on the east elevation and those observed internally. Carry out a full CCTV drain survey of the below ground drainage system. It may be necessary to monitor the cracks for a cycle of four seasons to determine if building movement is seasonal and ongoing. Investigate for damp penetration and retained moisture in the masonry. Determine the quantity of moisture in the masonry masses and its source(s). The render in general remains largely well bonded to the substrate, although the affected areas are likely to be holding moisture within the walls. In addition to localised structural movement displayed across parts of the	made. The results of the CCTV drainage survey and recommendations are awaited. ii) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown below including transition underpinning (all as highlighted in blue). iii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the	Subsidence-based movement of the workshop portion of the building may be ongoing. Inaction may result in further deterioration of the structure and ultimately failure of the supporting walls and partial collapse. Progressive ongoing water ingress and damage to the internal structure and fabric and the external render leading to further structural decay compromising the structural safety and loss of historic fabric.	В

(3e) Rear gable elevation of hall Evident brickwork cracking to the left-hand side of a former window opening (now infilled) to the left of the main hall family the window. Refer to the corresponding cracks internally within the hall, to the east gable wall. 1) Possible building subsidence due to faulty drains, tree roots and / or the internal face above for details) ii) Carry out trial pitting of the foundations for structural inspection. iv) Refer to table section relating to defects to the internal face of the wall. V) Check the junction between the flat roof to the hall stag pade wall for signs. Progressive ongoing was and damage to the internal and fabric and the extelleding to the structure and ultimate the supporting walls a collaboration and pathon and damage to the internal face of the wall. V) Check the junction between the flat roof to the hall stag gable wall for signs.	of Inaction Rep	Likely Consequence of Ina	Principles of Repair (subject to Further Investigation)	Further Investigation Required	Possible Cause(s)	Visible Symptom of Distress	Ref: [DP1]
Evident brickwork cracking to the left-hand side of a former window opening (now infillied) to the left of the main hall fanlight window. Refer to the corresponding cracks internally within the hall, to the east gable wall. Figure 1			We Male Tollet Nos Stage Kilchen Stage Crech	-			
window opening (now infilled) to the left of the main half fanlight window. Refer to the corresponding cracks internally within the half, to the east gable wall. Carry out trial pitting of the foundations. Expose the existing foundations for structural inspection. Window opening (now infilled) to the left of the main half fanlight window. Refer to the corresponding cracks internally within the half, to the east gable wall. It will be a structure and ultimate the supporting walls at a collapse. Progressive ongoing was not propressive subsidence (see above for details) It will be down including transition underpinning into the half the structure and ultimate the supporting walls at collapse. Progressive ongoing was not propressive subsidence (see above for details) It will be obtained in the structure and ultimate the supporting walls at collapse. Progressive ongoing was not propressive subsidence (see above for details) It will be obtained in the structure and ultimate the supporting walls at a damage to the internal damage		Subsidence-based movement					
EX-6 & window. Refer to the corresponding cracks internally within the hall, to the east gable wall. Expose the existing foundations for structural inspection. ii) Carry out trial pitting of the foundations. Expose the existing foundations for structural inspection. iii) Refer to table section relating to defects to the internal face of the wall. v) Check the junction between the flat roof to the hall stage and the hall east gable wall for signs of detachment due to building movement. iii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stirching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the	-	hall gable may be ongoing. In may result in further deteriorat		-		_	
inspection. iv) Refer to table section relating to defects to the internal face of the wall. v) Check the junction between the flat roof to the hall stage and the hall east gable wall for signs of detachment due to building movement. iii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the		the structure and ultimately fail	below including transition underpinning into the	iii) Carry out trial pitting of the foundations.		window. Refer to the corresponding cracks internally within the	EX-6 &
iv) Refer to table section relating to defects to the internal face of the wall. v) Check the junction between the flat roof to the hall stage and the hall east gable wall for signs of detachment due to building movement. Progressive ongoing wa and damage to the intern and fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was an damage to the internal fabric and the external progressive ongoing was and damage to the internal fabric and fab	and partial		hall return walls (all as highlighted in blue).	Expose the existing foundations for structural		hall, to the east gable wall.	7
the internal face of the wall. v) Check the junction between the flat roof to the hall stage and the hall east gable wall for signs of detachment due to building movement. ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the	vater ingress	Progressive ongoing water in					
hall stage and the hall east gable wall for signs of detachment due to building movement. ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the	rnal structure	and damage to the internal str					
ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the		leading to further structural	xos Main Hall Stage				
ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the	ral safety and	compromising the structural safe loss of historic fabric.		of detachment due to building movement.			
ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the		loss of filstorio fabric.					
underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the							
underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the							
stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the							
Structural engineer.							
			structural engineer.				

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]	· .	· ·		Investigation)		Priority
4.0	External side elevation (north)					_
	Upper part of Main Hall Upper Store Store Store Store					
(4a)	Side (north) elevation of entrance / stair lobby at ground floor	i) Possible building subsidence due to faulty drains and /or tree roots.	i) Investigate drains (see above for details)	Once the source(s) of the damp penetration have	Subsidence-based movement may be	B/C
	No signs of adverse structural defects in the external fabric.	ii) Water penetration into the façade, possibly through a combination of	ii) Establish ground movement monitoring to	been established, the affected areas will require	ongoing. Inaction may result in further	
Photos	However, internally there are numerous cracks in the walls to	causes such as faulty rainwater goods, roof leaks, water splashing, latent	check for progressive subsidence.	remediation and re-decoration.	deterioration of the structure.	
EX-2 &	the lobby/staircase. Green staining to the brickwork.	defects i.e. missing DPC, and deficiencies in the brickwork have likely caused the historic defects on this elevation. Active water overtopping from	iii) Carry out trial pitting of the foundations. Expose the existing foundations for structural	The roof guttering in this area is defective and will	Progressive ongoing water ingress	
	Furthermore the external ground hardstanding (Tarmacadam)	the guttering is evident, as seen during heavy rainfall during the survey.	inspection.	need to be replaced.	and damage to the internal structure	
	appears to have dropped relative to the building. Refer to the		iv) Refer to table section relating to defects to		and fabric and the external brickwork leading to further structural decay	
	accompanying building fabric and building services reports for		the internal face of the wall.	The water penetration may be remedied once the	compromising the structural safety and	
	other observations in this area.		v) Investigate for damp penetration and retained moisture in the masonry. Determine the quantity	below ground drainage repairs have been made. The results of the CCTV drainage survey and	loss of historic fabric.	
			of moisture in the masonry masses and its	recommendations are awaited.		
			source(s).			
				Refer to the External front elevation (west) for		
				underpinning recommendations.		
(4b)	Side (north) elevation of toilet block at ground floor (adjoining	As above	As above	Once the source(s) of the damp penetration have	Subsidence-based movement may be	B/C
Photos	external staircase) Brickwork cracking around and under the windows. Spalling			been established, the affected areas will require	ongoing. Inaction may result in further deterioration of the structure.	
Photos EX-3-5	and stained brickwork (possibly saturated) up to two brick			remediation and re-decoration.	deterioration of the structure.	
	courses above the external hardstanding.			The roof guttering in this area is defective and will	Progressive ongoing water ingress	
				need to be replaced.	and damage to the internal structure and fabric and the external brickwork	
				The water penetration may be remedied once the	leading to further structural decay	
				below ground drainage repairs have been made.	compromising the structural safety and loss of historic fabric.	
				The results of the CCTV drainage survey and		
				recommendations are awaited.		
				If subsidence is the cause of the movement the		
				foundations in the location of the subsidence will		
				likely require underpinning for the extent shown		
				below including transition underpinning (all as		
				highlighted in blue).		
				Sunday School Room		
				" " " " II		

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
				soligation,		1 110111
				Repair of the masonry cracks based on an		
				underpinning scheme would comprise of brick		
				stitching using stainless steel bars inserted into		
				the bed joints (such as Helifx), specified by the		
				structural engineer.		
(4c)	North elevation external staircase	Age-worn painted coverings to staircase elements.	Building surveyor / structural engineer to carry	If the staircase has passed all structural checks	In its current condition the staircase is	B/C
	Progressive loss of paint protection to stair stringers and		out focused intrusive survey of the staircase	and is compliant, it shall be stripped of all existing	not suitable as a means of access or	
Photo	handrailing through paint spalling and a coating of green algae.	Gutter water dripping from faulty roof rainwater goods onto staircase,	supports to check condition and robustness to	paint and re-coated with a suitable external grade	as a designated means of escape.	
EX-4	Open mesh glass reinforced plastic (GRP) floor treads are also	causing algae in addition to north facing elevation with minimal sun for	suit the Building Regulations, and current	primer and top coat. Allow for re-fixing the		
	covered in green algae.	drying.	codified lateral loading criteria.	staircase to the building. In the event the staircase		
				doesn't comply, allow for replacement including		
	Fixity of handrailing to the adjoining brickwork walls and flat roof		Metalworker to check the integrity of the existing	the balustrading.		
	to toilet block is unknown and condition of the fixings is in doubt		1950s/60s balustrading.			
	due to spalled paintwork and corroded fixings.					
(4-1)	Fortile (Nav. Decre) (readors extension average and enterpose)	i) Water production into the founds progible through a parkingling of	Lii) In againmetica with the CCTV durin control	The version of concepts and conversed at		D/0
(4d)	Family 'New Room' (modern extension over car park entrance) on west elevation	i) Water penetration into the façade, possibly through a combination of	ii) In conjunction with the CCTV drain survey	The repair of concrete and any corroded	Durability is essential for the continued	B/C
Dhoto	i) General water related damage to brickwork, including around	causes such as faulty rainwater goods, roof leaks and deficiencies in the brickwork have likely caused the defects on this elevation. Blocked gutters	and other investigations to check for ground	reinforcement is wholly dependent on the results of the investigations. Allow provisional sum for	structural health of the building and fabric. Openings in the external	
Photo EX-6	windows, and faulty guttering at roof corner junction (above first	seen in drone images.	subsidence, carry out a touching distance survey with associated non-destructive (ground	concrete repairs to the frame using Fosroc	envelope allow water to penetrate and	
LX-0	floor external fire escape door).	Seen in drone images.	penetrating radar [GPR] and intrusive (opening	Nitobond, Nitoprime Zincrish Plus and Renderoc	initiate decay.	
	ii) Stretch mark type diagonal and vertical cracks on the west	ii) Cause unknown. The construction of the modern family room building	up) investigations to determine:	ST-05 top coat.		
	and north face of the primary (assumed reinforced concrete	(built circa 1967/8) over the private roadway is not known; however if	a) construction of the building frame	or os top coat.		
	encased steel frame) beam supporting the brick façade at first	progressive ground subsidence is occurring around the perimeter of the	b) cause of the cracking, consider the possibility			
	floor.	building (as evidenced in this table) then movement could be causing the	of monitoring the cracks if they appear to have			
	iii) Construction of the first floor (Family Room) is reinforced	cracks to the superstructure.	opened further since the earlier conditions			
	concrete constructed using permanent formwork called wood-	'	reports by Sworder Associates.			
	wool slabs. The use of wood wool can lead to voids and	iii) Wood wool slabs. During the construction of the floor slab reinforcement	c) Consult with geotechnical specialist			
	honeycombing of	spacers were often used, which were sunk into the wood wool, which	consultant tasked with the site ground			
	the concrete. By examination there were no evident signs of	caused reduced concrete cover to the steel reinforcement,	investigation to establish the construction of the			
	excessive cement bleed on the soffit of the woodwool which is	and risks of rebar corrosion. See Investigations.	foundations to the family room building			
	one of the telltale signs of grout loss during concrete placement.		(according to the General Condition report by			
			Sworder Associates dated April 2008, the			
			foundations are pad footings).			
			iii) Due to the potential variability in the format			
			and condition of the concrete and reinforcement			
			hidden by wood wool boards it would be prudent			
			to locally remove approximately 5No random			
			locations of wood wool slab coverings to inspect			
			the condition of the floor slab and cover to the			
			reinforcement. Non-destructive testing			
			(ferroscanning) can be used to detect the			
			approximate depth of cover to the bottom			
			reinforcement in the floor slab.			

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
5.0	External side elevation (south)					
	Tomity Room Weeting Upper part of Main Hall Store Store Store Office					
(5a) Photos EX-13, 14 &	Side (south) elevation (central region) Staggered diagonal and vertical cracking in the brickwork walls generally between the lower and upper level windows. At least two (centre and left of centre) of the three segmental brick arches have dropped causing loss of support to the brick	i) The symptoms of distress suggest that the cause is ground related, which may be subsidence due to faulty drains and / or the action of tree roots. The dropping of the brick arches is activated by dropping of the supporting wall/piers.	 i) Investigate below ground drainage (see above for details) ii) Establish ground movement monitoring to check for progressive subsidence. iii) Carry out trial pitting of the foundations. 	i) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown (all as highlighted in blue).	Subsidence-based movement may be ongoing. Inaction may result in further deterioration of the structure. Durability is essential for the continued	B/C
15	spandrels between the windows which have cracked in a classic arched-shaped manner to remain stable.	ii) Open cracks in the façade allow water to penetrate into the wall core which exacerbates further deterioration due to damp and mechanical actions such as freeze/thaw. Other agents of decay include faulty rainwater	Expose the existing foundations for structural inspection. iv) Refer to table section relating to defects to	Female Totaled Sunday School Room	structural health of the building and fabric. Openings in the external envelope allow water to penetrate and	
	The brickwork below DPC level along the length of the three hall windows appear to be saturated, weathered, stained with salts and bed joints and perpend joints missing.	goods, roof leaks, water splashing, latent defects i.e. missing DPC, and deficiencies in the brickwork/mortar which need to be investigated further to enable appropriate repairs to be specified. The external ground is built up too high against the brick courses below DPC level, causing accelerated decay.	the internal face of the wall. v) Investigate for damp penetration and retained moisture in the masonry. Determine the quantity of moisture in the masonry masses and its source(s).	Kilchan Stage Store Store Crech	initiate decay.	
				ii) Repair of the vertical masonry cracks based on		
				an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into		
				the bed joints (such as Helifix), specified by the		
				structural engineer. Additional reinforcement to		
				repair the brick arch lintels can adopt the Helifix HeliBars which are installed in parallel lengths		
				bonded into cut slots directly above the existing		
				lintel. Angled CemTies or DryFix ties are installed		
				up through the lintel and into the masonry above		
				the lower HeliBars; specified by the structure in		
				accordance with Helifix installation requirements.		
				iii) The ground level adjoining the brick façade		
				needs to be lowered to at least 150mm below DPC		
				level.		
				The brickwork bed and perpend joints need to be		

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
				sacrificial mortar that allows moisture to drain from the joints rather than the brickwork.		
(5b) Photo EX-12	Side (south) elevation of office at first floor and creche under at ground floor Staggered diagonal cracking in the brickwork walls generally between the lower and upper-level windows. The pier to the right-hand corner adjoining the single-storey workshop has evidently dropped. The concrete gulley below the location of wall cracking is cracked. The gulley is also blocked, as evidenced during the survey during heavy rainfall.	i) The symptoms of distress suggest that the cause is ground related, which may be subsidence due to faulty drains and / or the action of tree roots. ii) Open cracks in the façade allow water to penetrate into the wall core which exacerbates further deterioration due to damp and mechanical actions such as freeze/thaw. Other agents of decay include faulty rainwater goods, roof leaks, water splashing, latent defects i.e. missing DPC, and deficiencies in the brickwork/mortar which need to be investigated further to enable appropriate repairs to be specified.	for details) ii) Establish ground movement monitoring to check for progressive subsidence. iii) Carry out trial pitting of the foundations. Expose the existing foundations for structural	i) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown (all as highlighted in blue). ii) Repair of the vertical masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifix), specified by the structural engineer. iii) Once the condition of the below ground drainage has been confirmed, allow for replacement of all the external gulleys on the south elevation (4No) and their connections to the	Subsidence-based movement may be ongoing. Inaction may result in further deterioration of the structure. Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	B/C
(5c) Photos EX-9, 10 & 11	Side (south) elevation of single-storey workshop at ground floor Two parallel rows of severe (fine to circa 10mm thickness) staggered diagonal cracking in the brickwork walls extending half-height between the underside of the small window and the ground; and probably extending to the foundations. A third finer crack extends from the flat roof verge to the level of the window sill, indicating a general tilting of the building towards the rear car park (to the east). The flat arch brick lintel to the small side window has a large tapered vertical crack to its left-hand side. The concrete gulley below the location of wall cracking is cracked. The gulley is also blocked, as evidenced during the survey during heavy rainfall.	i) The symptoms of distress suggest that the cause is ground related, which may be subsidence due to faulty drains and / or the action of tree roots. ii) Open cracks in the façade allow water to penetrate into the wall core which exacerbates further deterioration due to damp and mechanical actions such as freeze/thaw. Other agents of decay include faulty rainwater goods, roof leaks, water splashing, latent defects i.e. missing DPC, and deficiencies in the brickwork/mortar which need to be investigated further to enable appropriate repairs to be specified.		i) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown (all as highlighted in blue). ii) Repair of the vertical masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifix), specified by the structural engineer.	Subsidence-based movement may be ongoing. Inaction may result in further deterioration of the structure. Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	B/C

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
				iii) As noted above, allow for replacement of all the external gulleys on the south elevation (4No) and their connections to the drainage network.		
6.0	Internal – Hall roof structure above the ceiling (Read the following in conjunction the accompanying drawing ref: ACM-SK-HF-250321-001_WaterLane_Truss, and the photographs) Hall roof space	i) Water penetration through defects in the roof coverings. Condensation	i) Assess suitability of the 3No water tanks	i) A mechanical / environmental engineer		B/C
Photos H ROOF 1 - 6	i) Signs of water ingress and damp staining. White mould staining evident on the underside of various sarking boards and purlins. ii) Structural robustness: The roof purlins are supported from the brickwork gable walls via angle irons embedded in the brickwork (not inspected on east elevation). Whilst there is positive vertical support the connection is missing lateral restraints (or ties) between the primary roof structure and the gable end walls at the east and west elevations. iii) Splits and shakes observed in the principal trussed rafters. iv) Unsafe means of access (H&S): Access to the hall roof space is through a ceiling hatch via the gallery landing at first floor level. There does not appear to be a managed safe means of entry to the roof other than the use of a long demountable aluminium ladder stored in the boiler room, which when erected extends circa 5 metres in height from gallery level adjoining the double-height space to the hall. This is a working at height hazard. During AECOM's survey, access to the roof space was made via a hired mobile access scaffold. v) Unsafe means of access within the roof space (H&S): Access within the roof space is provided by a narrow boarded timber walkway that spans parallel with the attic floor joists (the hall ceiling joists). The structure of the walkway is not known. At the time of AECOM's survey the walkway was concealed by loose fibreglass insulation, thus access in the roof space was limited to the area boarded around the access hatch at the western end. The dormer roofs are accessible from the main roof void via crawl boards and access / observation holes. These areas were not accessed for health and safety reasons.	i) Water penetration through defects in the roof coverings. Condensation within the roof space through insufficient ventilation to supply the large roof void. The 2022 quinquennial inspection report by GE Sworder & Sons reported that during their mid-summer inspections in the roof void the moisture levels were recorded to be elevated. The March 2025 drone aerial survey imagery confirms that there are defects in the roof coverings, whereby in places the tiles are broken, shaled, slipped or missing. The weatherproofing detail between the tiled roof coverings at the junction between the main roof and the dormers is not known. The 2022 quinquennial inspection report by GE Sworder & Sons reported that, 'Externally, the roofs appeared in good condition. The main roof is clad in machine made clay tiles and appeared good and sound. We believe that repairs that have been carried out will ensure the roofs will have many years of useful service'. It is not clear in the above report how access was made to inspect the external roof coverings. ii) The absence of mechanical lateral and vertical tying of a roof structure to the perimeter walls is a requirement under Part A (Structure) of the UK Building Regulations to fulfil the robustness requirements. In unframed buildings such as Water Lane Hall, structural robustness, or the ability to withstand disproportionate collapse after an initial failure is enhanced through the use of lateral ties, which are horizontal and vertical elements designed to ensure continuity and distribute loads preventing a local failure from causing a widespread collapse. iii) Splits (shakes) are generally found in larger softwood and hardwood timber members of this type and age. These are drying fissures, which are a separation along the fibres of the timber and are the result of the relief of stresses caused by differential shrinkage of timber as it dries. They are generally not considered to be a structural concern, provided the timber is kept dry and protected from water penetration and damp t	i) Assess suitability of the 3No water tanks, including asbestos containing materials. ii) Investigate remaining areas of roof space (particularly the areas affected by prolonged water ingress) once a safe means of access is arranged within the roof.	i) A mechanical / environmental engineer including a building surveyor should be consulted to assess the existing internal natural ventilation provisions and provide recommendations to improve the overall ventilation in the roof space. ii) Install lateral restraints to the roof / gable walls to the structural engineer's design. iv) An access consultant should be consulted to design improved high-level access to the hall roof ceiling hatch above the gallery. v) An access consultant should be consulted to design improved safe means of access within the hall roof and adjoining dormer roofs. vi) Asbestos specialist to inspect the roof space and undertake a Refurbishment and Demolition survey of the existing three water storage tanks. Building services engineer for Water Lane Hall to advise on the recommended removal of the asbestos materials from the roof and replacement with modern non-asbestos equivalents as needed.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. By tying the structure together, ties create a more resilient system that can withstand accidental events such as storms with high wind.	B/C

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
.0	Internal – Hall roof structure below the ceiling					
	(Read the following in conjunction the accompanying					
	drawing ref: ACM-SK-HF-250321					
	001_WaterLane_Truss, the photographs and the hall					
	ceiling spot level survey in the appendix.					
'a)	i) A	i) The second of stouchurs increasing of the hell heilding by DCA Ctouchurs	The manual condition of the hell colling fivings	Denoise to the political many has pended if the place	Civer the wester in succession the hell with	
notos	 i) Assessment of vertical deflection of the bottom chord of the roof trusses below the hall ceiling. 	i) The report of structural inspection of the hall building by RCA Structures dated October 2016 refers, 'We could see that the roof trusses have	The general condition of the hall ceiling fixings to the attic floor structure is not known.	Repairs to the ceiling may be needed if the close boarding is becoming detached. Make allowance	Given the water ingress in the hall via the roof coverings, it is prudent to	В
INT	1001 trusses below the fiall celling.	deflected under the load of the existing roof. This is causing the joints to	to the attic hoof structure is not known.	for access to fully survey and enhance the fixings	carry out the survey work in the next	
4		open [in the] timber sections and is creating a lateral load to be applied to	It is recommended that investigations are	between the boarding and ceiling joists.	12 months so that an action plan can	
7		the external walls. Extensive repair works will be required to repair the	made (using scaffolding or a mobile elevated	between the boarding and ceiling joists.	be made for the repairs.	
	1498 AT 1000 A	trusses and ensure that they are structurally sound.'	working platform (MEWP) to carry out spot		be made for the repairs.	
	A STATE OF THE PARTY OF THE PAR	In their report RCA Structures advised they did not enter the hall roof space	checks by locally removing ceiling boards, in			
	MANACE 100 100 100 100 100 100 100 100 100 10	to inspect the roof structure. AECOM carried out a partial inspection of the	conjunction with touching distance inspections			
	, at 1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (roof space during the March 2025 surveys and undertook spot level surveys	from within the attic space. Given the limited			
	,san	of the hall ceiling structure to observe the truss deflections. The results of	walkways in the roof, a planned safe means of			
	[6]	the spot level survey are included in the Appendix, and the overall range in	access is needed to carry out this work.			
	(a) (a) (b) (a) (a) (a) (a) (a) (a) (a) (a) (a) (a	measured defection of the bottom truss chord is summarised as follows (in	,			
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	millimetres):				
	Extract from topographical survey (AECOM 2025)	TRUSS 1 (West): 16mm downward shape between outer knee braces.				
		TRUSS 2: 25mm upward shape between outer knee braces.				
	50 L 50 8	TRUSS 3: 22mm upward shape between outer knee braces.				
	00.70	TRUSS 4 (East): (0mm) flat bottom truss chord between outer knee braces.				
	W011 3_043△	Based on the above results, it is evident that the four principal roof trusses				
	West 1 3,046 \(\triangle \)	have not deflected significantly under load from the roof (and attic floor).				
	Well 3,046	The hall ceiling construction is comprised of gloss paint coated close				
	10	boarding which is secret nailed/screwed to the ceiling support timber				
	56.62	structure. It is evident there is a general undulating profile in the surface of				
	Extract from measured survey of hall (for truss identification)	the ceiling, which can trick the observer into thinking the structural frame is				
		distorting.				
		actoring.				
b)						
	ii) Assessment of verticality (i.e. plumbness) of the external	As noted in Section 2, the principal roof structure to the hall is a hybrid	It is recommended that structural investigations	Structural repairs may needed to the roof truss if	Given the age of the building and the	В
	walls to the hall at truss supports.	timber scissor truss incorporating steel tension rods, timber knee braces	be made (using scaffolding or a mobile elevated	the touching distance inspections reveal that the	history of water ingress in the hall via	
		and a horizontal timber chord (tie) member (see extract below from the truss	working platform (MEWP) to carry out spot	timber components such as the knee brace have	the roof coverings, it is prudent to	
	Roof spread can occur with this type of roof structure when the	section drawing). Generally, compared to conventional closed triangular	checks of all trusses, notably TRUSS 3 in the	moved over time, allowing load to push against the	carry out the survey work in the next	
	principal rafters are not adequately tied, causing them to open	roof trusses, scissor trusses can apply horizontal loading (or thrust) at the	hall. Assessing the timber joints to the truss to	external wall.	12 months so that an action plan can	
	in a scissor-like pattern. The first signs of roof spread are often	supports which needs to be resisted by the bearings. The truss	check if they have opened due to roof spread or		be made for any repairs.	
	cracks, bulging, or leaning at the head of the masonry, causing	arrangement at Water Lane Hall incorporates a horizontal chord which acts	other reasons.	Make allowance for access to fully survey and		
	bowed walls.	as a tie to resist the horizontal load. However, the knee braces meet the		enhance the fixings top TRUSS 3 below the hall		
		walls below the level of the bottom chord, so there may be some residual		ceiling.		
	Previous structural modifications have been made to several	load thrust onto the external walls to the hall (see drawing extract below).				
	truss feet, using bolted steel plates/shoes, which were probably	Some resistance to lateral thrust is resisted by the two-storey side additions				
	installed in response to water damage to the truss bearings.	to the hall on the north and south elevations (i.e. the storerooms to the				
		south, and the offices and WCs to the north.				

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]				Investigation)		Priorit
		Based on this, digital verticality checks have been carried out to assess the				
		verticality of the hall walls between the gallery (first) floor and the head of				
		the dormer roof (truss bottom chord).				
		0				
		Tie				
		5, 117 179				
		Thrust				
		The results of the wall verticality survey are included in the Appendix, and				
		summarised as follows.				
		The offsets in millimetres are the measured out-of-plumbness of the internal				
		wall. The offsets are taken from the face of the wall finish, therefore there				
		may be inaccuracies due to irregularities in the wall construction:				
		That, so mesod due to megalamico in the man conditionion				
		South wall at TRUSS 1 = 37mm				
		South wall at TRUSS 2 = 14mm				
		South wall at TRUSS 3 = 63mm				
		South wall at TRUSS 4 = 22mm				
		North wall at TRUSS 1 = 8mm				
		North wall at TRUSS 2 = 16mm				
		North wall at TRUSS 3 = 58mm				
		North wall at TRUSS 4 = 6mm				
		Walls that are either built out-of-plumb or move out-of-plumb in service can				
		become potentially unstable when the centre of gravity of the wall moves				
		beyond t/6 where t = the <i>structural</i> thickness of the wall. At Water Lane Hall				
		we have assumed a thickness of 330mm for the external walls at the level				
		where the roof knee brace intersects the wall. The results show that the				
		verticality of wall locations supporting roof trusses 1, 2, 3 & 4 are all safely				
		within acceptable verticality recommendations for walls based on a limit-of-				
		lean of t/3 (110mm). The wall at Truss 3 appears to show higher horizontal				
		displacements (as highlighted in red) with an average value of 60mm.				
		Whilst 60mm still falls well within width t/3 (110mm), the movement may be				
		one of the reasons for the brickwork wall cracking seen internally within the				
		hall (see table section 8b).				
70)						5.0
7c)	iii) Conord water ingrees through the bell of the Double Con		Defeate recommendations in the Building			B/C
	iii) General water ingress through the hall ceiling. During the		Refer to recommendations in the Building	Refer to recommendations in the Building	Durability is essential for the continued	
	March 2025 surveys AECOM was advised by the church elder	3	Surveyor's report.	Surveyor's report.	structural health of the building and	
	that recent rainfall had entered the roof and ceiling and dripped	and the Building Surveyor's report in the appendix.	Additionally abody the condition of the attained		fabric. Openings in the external envelope allow water to penetrate and	
	onto the hall floor at ground level in up to three locations.		Additionally, check the condition of the stained		initiate decay.	
4			ceiling boards and the supporting substrate.			1

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
	Water staining to the ceiling boards. Possible decay of the boarding and supporting joists.					
8.0	Internal – Hall (gallery) at first floor					
(8a)	i) Galley floor / internal balcony: The internal balcony runs around the main hall and it provides	General loosening of the timber structure, through age and wear and tear. Possible water damage from the roof leaks may have affected parts of the	In the areas where the gallery floor coverings appear to be loose, and areas prone to water	Allow for local repairs to gallery floor (say 2No	Durability is essential for the continued	B/C
H INT 5 & 6	access to the first floor rooms. There are no evident sighs signs of structural distress. By locally removing an LED light under the gallery floor it was possible to observe the general floor construction of the balcony, which is comprised of cantilevered steel beams from the rear rooms each side of the hall supporting the timber floor construction and balustrading to the balconies. In some areas the gallery floorboards appeared loose and squeaky.	timber and steel structure.	ingress, locally lift the floor coverings and examine the condition of the floor structure.	areas) and tightening the floorboard connections where loose using additional wood screws.	structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	
(8b)	ii) Gallery walls (cracking)	Given there are evident ground movement related defects around parts of	i) Investigate drains (see external observations	i) If subsidence is the cause of the movement the	If it is active subsidence, it will continue	
Photos GAL-1 - 19	There is widespread and sporadic plaster cracking to the perimeter walls around the hall at all truss / wall interfaces and around and under the dormer windows between the trusses.	the Water Lane Hall building(s), damage from subsidence cannot be discounted until appropriate factual site data is obtained through various investigations.	ii) Physical checks to check if the plaster cracks	foundations in the location of the subsidence will likely require ground improvement or underpinning for the extent shown below	causing further cracks, water ingress and loss of stability affecting the safety of the building.	B/C
	Some of the cracking located around the hall windows and gable ends is severe. This is shown in the photographs in Appendix A. The age of the defects is not known, however wall cracking is recorded in the 2002 and 2008 condition reports by Sworder & Sons, and the 2016 structural report by RCA Associates.	Other causes for the cracking could be structural movement of the roof, which is discussed above (in table sections 7a and 7b), water penetration, condensation and thermal effects. Earlier reports suggest that the wall construction to the dormer roofs is a type of clinker concrete. Clinker is a by-product from the coal industry, and it is known to	continue through into the wall structure. This is particularly important in the masonry arched walls below the hall windows on the north and south elevations. Open up plaster to the arches to check extent of damage to masonry.	highlighted in blue in the region of the 6No loadbearing masonry piers. Sunday School Room Male Toliel Male Toliel		
	Some of the cracks appear to coincide with wall cracking in the external brickwork face. It is not known if associated cracking continues internally to ground floor level due to mush of the wall surfaces being concealed behind wooden boarded dado		iii) Establish movement monitoring to check for progressive subsidence (see external observations for further details).	aboos Main Hall Stage		
	panels.		iv) Carry out trial pitting of the foundations. Expose the existing foundations for structural inspection. Open up the dormer walls to determine their construction, in conjunction with	Store Store Crech		
			the other investigations. v) Refer to table section relating to defects to the	ii) Repair of the masonry cracks based on an underpinning scheme would comprise of brick		
			external face of the walls.	stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the structural engineer. Repairing the internal cracking to the plaster would benefit		
				reinforcement of the new plaster interface with existing.		
				If the masonry arches are found to be defective, additional reinforcement to repair the brick arches may be able to adopt a Helifix solution (subject to		

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
				structural engineer's report). Helifix HeliBars which are installed in parallel lengths bonded into cut slots directly above the existing arch. Angled CemTies or DryFix ties are installed up through the lintel and into the masonry above the lower HeliBars; specified by the structure in accordance with Helifix installation requirements.		
(8c) Photos GALL- 11 & 12	ii) Gallery walls (water damage) At the location of the wall support to TRUSS 1 on the internal south wall of the hall there has been progressive water damage due to a roof leak above which has also affected the wall in the south staircase lobby.	Water penetration, principally from the roof.	During the March 2025 survey, the church elder advised AECOM that the roof leak had been temporarily repaired. The type and quality of the roof repair is not known, however AECOM's aerial drone imagery in 2025	Chip off damaged plaster and locally re-plaster wall and re-decorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	
	The internal face of the south gable wall to the hall shows signs of paint spalling.	The damage to the gable wall may be due to the water storage tanks at roof attic level, which may be leaking.	appears to show new roof soaker flashing between the main hall roof and the west dormer roof. Further temporary repairs appear to have been made to the flat roof interfacing the pitched hall roof, however it is not known if this is a recent repair. The long-term reinstatement of the roof coverings needs to be considered, as temporary fixes will fail in the short term causing further damage.			
9.0	Internal – Meeting (parlour) room at first floor					
(9a) Photos PAR 1-	Farrily Room	Given there are evident ground movement related defects around parts of the Water Lane Hall building(s), particularly at the east (car park) side, damage from subsidence cannot be discounted until appropriate factual	i) Investigate drains (see external observations for further details)	i) If subsidence is the cause of the movement the foundations in the location of the subsidence will likely require underpinning for the extent shown		
4	The ceiling above the church parlour room has a raised collar roof arrangement. There are visible signs of water penetration due to water staining, spalling and cracking on the ceiling and walls. There are also signs of roof spread and possible	site data is obtained through various investigations. Other likely causes for the cracking and movement of the roof is water penetration, condensation and thermal effects.	ii) Physical checks to check if the plaster cracks continue through into the wall structure. iii) Establish movement monitoring to check for progressive subsidence (see external observations for further details). iv) Carry out trial pitting of the foundations. Expose the existing foundations for structural inspection.	below highlighted in blue, with transition underpinning along the flanking walls as shown. Fenale Tolled Red	of the building. Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	
	distortion of the roof/ceiling towards the rear wall facing the car park. This is evidenced by stretch mark patterns of cracking in the ceiling.		v) Refer to table section relating to defects to the external face of the walls.	ii) Repair of the masonry cracks based on an		
	The parlour room floor is live and bouncy under the heel-drop test, and the vibration causes the internal door to rattle. The floor is also noticeably rolling towards the rear wall.			underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the structural engineer. Repairing the internal cracking to the plaster would benefit		

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]				Investigation)		Priorit
	The parlour room door won't fully close in its frame, suggesting			reinforcement of the new plaster interface with		
	that structural movement has or is occurring.			existing.		
				iii) Allow for structural repairs to the first-floor		
				joists, including splicing new timber joists to ends		
				of joists and supporting them off masonry hangers		
				Re-levelling the floor using levelling timber fillet		
				and reinstating the floor deck using 18mm		
				plywood fully screwed down.		
				iv) Repair roof structure if adverse distortion has		
				pulled member connections apart. Repair roof		
				coverings and vaulted ceiling.		
10.0	Internal – The 'New Room' at first floor					
(10a)						
		Given there are evident ground movement related defects around parts of	i) Investigate drains (see external observations	i) If subsidence is the cause of the movement the	If it is active subsidence, it will continue	Α
Photos		the Water Lane Hall building(s), particularly at the east (car park) side,	for further details).	pad foundations in the location of the subsidence	causing further cracks, water ingress	
NEW-	Tumby Room	damage from subsidence cannot be discounted until appropriate factual		will need to be assessed to see if they need to be	and loss of stability affecting the safety	
1-3	Office Working	site data is obtained through various investigations.	ii) Carry out trial pitting of the foundations.	modified. This is subject to the results of the	of the building.	
			Expose the existing foundations for structural	investigations.	Durability is essential for the continued	
	Upper part of Main Hall	Other likely causes for the water ingress is water penetration, and	inspection. Check for active tree roots.		structural health of the building and	
		condensation.		ii) Repair flat roof coverings entirely, replace	fabric. Openings in the external	
			iii) Refer to table section relating to defects to	damaged sections of ply decking and ceiling	envelope allow water to penetrate and	
	Size Size Size Office		the external face of the walls.[DP2]	plasterboard. Building surveyor / architect to	initiate decay.	
			iv) Refer to investigations in table section ref: 4	advise on thermal insulation requirements to meet		
	According to earlier reports, the new room was built in 1969.		regarding the first-floor slab with wood wool	the current Building Regulations.		
	The New Room is situated above the private car park		formwork material.	"") De de consta ma con		
	undercroft, and it is constructed in a steel frame encased in		iomwork material.	iii) Redecorate room		
	concrete with a concrete first floor slab with 'wood wool'					
	permanent formwork left visible insitu on its underside.					
	The frame is built on pad foundations, and the external walls					
	are built in cavity wall construction.					
	i) There are signs of structural movement at the north end of					
	the room (facing Waitrose carpark), evidence by various					
	cracks to the brickwork and concrete encasement. Reports of					
	movement were recorded in the 2008 report by Sworder &					
	Sons.					
	ii) Deef water paretratics at mathematical and the same of the sam					
	ii) Roof water penetration at northeast corner of the room. The					
	ceiling finishes have perished and collapsed locally. There is					
	active water on the surface of the timber flat roof joists, white					
	and green mould on the underside of the ply roof deck and					
	black mould on the plasterboard ceiling. The approximate affected area is 10m2.					

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
	iii) Paint spalling around the perimeter walls to the room.					
1.0	Internal – First floor lobby and WCs					
11a) Photo VC-1	i) Cracked and water stained ceiling in WC adjoining fire exit door. ii) Cracked and water stained ceiling and walls above fire exit door in lobby area.	Water penetration, principally from the roof.	Open up ceilings. Check condition of roof joist ends and lintels.	Repair roof structure if members are locally decayed. Repair roof coverings and ceiling / walls. Redecorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. [DP3]	В
2.0	Internal – First floor offices (north side)					
Photos PFF- 1	Fumby Room Meeting	Water penetration, principally from the roof.	Open up ceilings. Check condition of roof joist ends and lintels.	Repair roof structure if members are locally decayed. Repair roof coverings and ceiling / walls.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	
	Upper part of Main Holl Upper part of Main Holl Office			Allow for local structural repairs to the first-floor joists, including splicing new timber joists to ends of joists and supporting them off masonry hangers. Redecorate.	If dry rot is present, it will spread rapidly to other parts of the building via the masonry walls. Repair costs will rise if dry rot is not treated early.	
	i) Cracked and water stained ceiling in office room adjoining fire exit door. Flat roof above. Floor coverings are dark stained. Condition of floor structure unknown. Floors are fairly live.					
	ii) Partially collapsed lath and plaster ceiling in adjoining office room. Rotten timber joists. Signs of dry rot spores on					

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]				Investigation)		Priority
	underside of joists. Black mould on ceiling surface and					
	widespread cracking. Fresh air coming through the hole in					
	ceiling, signalling that water penetration is ongoing.					
13.0	Internal – First floor offices (south side)					
(13a)						
I		Given there are evident ground movement related defects around parts of	i) Investigate drains (see external observations	i) If subsidence is the cause of the movement the	Refer to the above comments relating	В
I		the Water Lane Hall building(s), particularly at the east (car park) side,	for further details)	foundations in the location of the subsidence will	to the Parlour Room.	
]	Family Room	damage from subsidence cannot be discounted until appropriate factual		likely require underpinning for the extent shown		
1		site data is obtained through various investigations.	ii) Physical checks to check if the plaster cracks	(see table section 5b).		
	One we will be a second of the		continue through into the wall structure.			
	Upper part of Main Hull	Other likely causes for the cracking and movement of the roof is water		ii) Repair of the vertical masonry cracks based on		
		penetration, condensation and thermal effects.	iii) Establish movement monitoring to check for	an underpinning scheme would comprise of brick		
			progressive subsidence (see external	stitching using stainless steel bars inserted into		
	Scor. Scor.		observations for further details).	the bed joints (such as Helifix), specified by the		
				structural engineer.		
			iv) Carry out trial pitting of the foundations.			
	i) The ceiling above the creche area has a raised collar roof		Expose the existing foundations for structural			
	arrangement. Whilst there are no visible signs of water		inspection.			
	penetration, there are cracks to the ceiling and walls, and a		Defends table coefficient and defends to the			
	black stain above the entrance door to the hall gallery. Based		v) Refer to table section relating to defects to the external face of the walls.			
	on the external observations noted above in the table, there are		external race of the wails.			
	signs of building movement at the southeast corner.					
	ii) The floor is live and bouncy under the heel-drop test.					
	Family Room					
						В
(13b)	Meeting	Given there are evident ground movement related defects around parts of	Open up ceilings.	Repair roof structure if members are locally	Repair roof structure if members are	
		the Water Lane Hall building(s), damage from subsidence cannot be	Check condition of roof joist ends and lintels.	decayed.	locally decayed.	
	Uppor part of Main Hell	discounted until appropriate factual site data is obtained through various investigations.		Repair roof coverings and ceiling / walls.	Repair roof coverings and ceiling /	
		-		Allan for local attractive local at 1 C of	walls.	
	Store Store Store	Other likely causes for the cracking and movement of the roof is water		Allow for local structural repairs to the first-floor	Allow for local attractural repairs to the	
		penetration, condensation and thermal effects.		joists, including splicing new timber joists to ends of joists and supporting them off masonry	Allow for local structural repairs to the first-floor joists, including splicing new	
	i) Cracking in ceiling			hangers.	timber joists to ends of joists and	
				inangoro.	supporting them off masonry hangers.	
	ii) Live floors under the heel-drop test			Redecorate.	Tapporting atom on maconly hangers.	
					Redecorate.	
	iii) Water damage to wall/ceiling adjoining TRUSS 1 and south					
	stair lobby.					

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
14.0	Internal – Stair lobby (south side)			investigation)		1 110111
	monus cum iossy (ocum ciuc)					
(14a) Photos SW-1 - 3	i) Water damage to wall/ceiling adjoining TRUSS 1 / office room at first floor ii) Wall paint peeling and spalling	Refer to table section (2c) comments (stair lobby)	Refer to table section (2c) comments (stair lobby)	Refer to table section (2c) comments (stair lobby) i) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the structural engineer. Repairing the internal cracking to the plaster would benefit reinforcement of the new plaster interface with existing. ii) Repair roof structure if adverse distortion has pulled member connections apart. Repair roof coverings and vaulted ceiling.	If it is active subsidence, it will continue causing further cracks, water ingress and loss of stability affecting the safety of the building. Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay.	В
	iii) Multiple cracks to the ceiling and walls generally, notably above south window and above and around west bullseye window/fanlight window.					
5.0	Internal – Stair lobby (north side)					
15a)						
Photos NW-1 -	i) Multiple cracks to the ceiling and walls generally, notably above and around the north window and the west bullseye window/fanlight window. The cracking on the ceiling is a type of a parallel stretching pattern suggesting ground movement at the northwest corner of the stair lobby building. The cracking in this room is Severe . ii) At the first floor landing the junction between the rebated stone tread stair and the landing slab has separated. This is evidenced by spalling paint along the line of the stone joint, and a physical vertical gap between the top of the tread and the underside of the landing.	Refer to table section (2a) comments (stair lobby) Staircase defect – The most likely cause of the opening up of the joint between the stone landing and the upper stair flight is ground movement and consequent dropping of the building on the NW corner. CAUTION: With this type of staircase construction (stone cantilevered staircase), the stair flight is supporting the first-floor landing slab, and the metal balustrading is preventing the staircase from twisting under load. Therefore, the apparent dropping of the upper flight could affect the structural support of the landing which would become a health and safety hazard.	Refer to table section (2a) comments (stair lobby) Staircase defect – Movement monitoring of the staircase and the wall and ceiling cracking to determine if movement is progressive.	Refer to table section (2a) comments (stair lobby) i) Repair of the masonry cracks based on an underpinning scheme would comprise of brick stitching using stainless steel bars inserted into the bed joints (such as Helifx), specified by the structural engineer. Repairing the internal cracking to the plaster would benefit reinforcement of the new plaster interface with existing. Repair roof structure if adverse distortion has pulled member connections apart. Repair roof coverings and vaulted ceiling. ii) Allow for temporary support of the upper landing and stair flight with designed temporary works that still enables the entrance lobby and staircase to be used. Permanent repairs are subject to the results of the ground investigations. Allow for remedial works pinning of the stone staircase using multiple thin steel shim plates packed into the gaps between the stone elements injected with a suitable grout, all to the structural engineers design.	If it is active subsidence, it will continue causing further cracks, water ingress and loss of stability affecting the safety of the building. Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. The dropped staircase could become a health and safety hazard if the cause of the movement is not investigated.	B A (staircas

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
16.0	Internal – Stage area (east) ground floor					
(16a) Photo ST-1	i) Heavy (dark) water staining on ceiling boarding to monopitch roof at rear of stage. Structure of the roof is not confirmed, but likely to be timber joisted supported from the hall gable east wall and the east elevation wall facing the car park.	Water penetration, principally from the roof.	Open up ceilings. Check condition of roof joists and at their bearing ends and wallplates. Check for presence of vertical tie straps	Repair roof structure if members are locally decayed. Repair roof coverings and ceiling / walls. Redecorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. If dry rot is present, it will spread rapidly to other parts of the building via the masonry walls. Repair costs will rise if dry rot is not treated early.	В
17.0	Internal – ground floor offices (south side)					
(17a)	i) Cracking around the side and head of the windows, spalled paint and chipped plaster. ii) Cracking running along the ceiling junction with the internal walls. Black mould in crack in front corner of room, and black residue on wall where water has penetrated ceiling from above. iii) Ceiling cracked around vertical pipework penetrating ceiling.		Open up ceilings. Check condition of roof joists and at their bearing ends and wallplates.	Repair roof coverings and ceiling / walls. Allow for local structural repairs to the first-floor joists, including splicing new timber joists to ends of joists and supporting them off masonry hangers. Redecorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. If dry rot is present, it will spread rapidly to other parts of the building via the masonry walls. Repair costs will rise if dry rot is not treated early.	A/B

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
18.0	Internal – ground floor WCs (north side)					
(18a)	i) Various cracks running along the ceilings. Defects in floor above include active water penetration and potential dry rot.	Water penetration, principally from the roof. Possible condensation.	Open up ceilings. Check condition of floor joists and at their bearing ends and wallplates.	Repair roof coverings and ceiling / walls. Allow for local structural repairs to the first-floor joists, including splicing new timber joists to ends of joists and supporting them off masonry hangers. Redecorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. If dry rot is present, it will spread rapidly to other parts of the building via the masonry walls. Repair costs will rise if dry rot is not treated early.	
19.0	Internal – ground floor 'Gym Room)					
(19a)	i) Various cracks running along the ceilings. Defects in floor above include active water penetration.	Water penetration, principally from the roof. Possible condensation.	Open up ceilings. Check condition of floor joists and at their bearing ends and wallplates.	Repair roof coverings and ceiling / walls. Allow for local structural repairs to the first-floor joists, including splicing new timber joists to ends of joists and supporting them off masonry hangers. Redecorate.	Durability is essential for the continued structural health of the building and fabric. Openings in the external envelope allow water to penetrate and initiate decay. If dry rot is present, it will spread rapidly to other parts of the building via the masonry walls. Repair costs will rise if dry rot is not treated early.	

Ref: [DP1]	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further Investigation)	Likely Consequence of Inaction	Repair Priority
20.0	External – Freestanding brickwork masonry					
	boundary wall between Water Lane Hall and					
	Waitrose car park					
(20a)		Possible cause of leaning wall is ground movement due to the adjoining				
Photos EXT W1, W2 & W3	Hat Pag Hat Dale Hat Pag Hat Pag Hat Dale Hat Pag Hat	Possible cause of leaning wall is ground movement due to the adjoining (horse chestnut) trees. Walls that are either built out-of-plumb or move out-of-plumb in service can become potentially unstable when the centre of gravity of the wall moves beyond width t/6 where t = the <i>structural</i> thickness of the wall. The freestanding wall highlighted in red with thickness 340mm is leaning 140mm out of plumb, which falls outside width t/3 (110mm). There is a risk that the wall is unstable due to eccentric loading. Masonry walls have little or no tensile strength, therefore walls that lean and are put into tension may have to be to built or strengthened with masonry buttressing. The wall is	The Client is to determine the ownership of the boundary wall, and whether the wall highlighted in red is listed or locally listed. Since any permanent repairs or rebuilding parts of the wall may require consultation.	ii) TEMPORARY PROPPING To be designed by temporary works contractor / engineer to provide a safe means of support to the west end of the wall highlighted in red, whilst a permanent remedial works proposal is agreed for the wall. iii) Repair cracking in wall highlighted in blue using Helifix crack stitching to specialists details.	Once a wall is out of plumb, the process accelerates because of eccentric loading. The Water Lane end of the wall highlighted in red is unstable.	A
		have to be re-built or strengthened with masonry buttressing. The wall is also susceptible to impact from vehicles from the hall side.				
	i) Length of wall highlighted in green Between 1.1 and 1.63m height. Modern brickwork, 215mm thick, possibly built in recent past. Wall is reasonably plumb.					
	ii) Length of wall highlighted in red Between 1.85m and 2.14m height. Thickness 340mm. Older (red) brickwork, possibly original. At its western end the wall integrity is poor, with loose and missing brickwork and joints. Heavy moss growth at the head of the wall. Height of wall different each side due to Water Lane Hall side road having steeper gradient. Severe distortion of the wall which is leaning into the public pavement serving the supermarket. The wall is not in contact with the adjoining 215mm thick wall at its western end (adjoining the wall highlighted in green) where the maximum					
	lean in the wall from the vertical is 140mm. The wall begins to straighten as it runs east (towards the wall highlighted in blue). At mid-length the wall leans 60mm from the vertical.					
	iii) Length of wall highlighted in blue	munit (Section 1)				
	Between 2.14m and 2.4m in height. Thickness 215mm					
	(upper) 440mm (lower) thickened both sides. Heavy moss growth at the head of the wall. Height of wall different each	THE RESERVE OF THE PARTY OF THE				
	side due to Water Lane Hall side road having steeper					
	gradient.					
	Wall is reasonably plumb. There is a vertical diagonal crack					
	through the wall at approximately mid-length.					
	iv) Length of wall highlighted in <mark>yellow</mark>					

Ref:	Visible Symptom of Distress	Possible Cause(s)	Further Investigation Required	Principles of Repair (subject to Further	Likely Consequence of Inaction	Repair
[DP1]				Investigation)		Priority
	Between 1.93m and 1.8m in height. Thickness 215mm. Heavy					
	moss growth at the head of the wall. Historic distortion in the					
	wall on plan. Wall reasonably plumb.					

4. Discussion of Defects and Recommendations

There are major structural and fabric related problems in the building which need further investigations before repairs can be specified with confidence. The key areas of concern are the perimeter elevations of the building(s), notably the south, east and west sides which are all showing signs of distress associated with ground related movement. For example, in the two stairwell entrance lobbies on the west elevation there are pronounced patterns of cracking in the walls that suggest parts of the building are rotating about their bases causing stretch-mark patterns in ceilings and cracks in walls that are splitting apart. Stretch-mark cracks in the ceiling can also be seen in the first floor (parlour) room on the east elevation facing the car park together with a marked downward roll in the level of the floor towards the external (east) wall. At the southeast corner, adjoining the creche room the adjoining single-storey workshop building has physically tilted towards the car park, with the consequent splitting apart of the masonry. During the heavy rainfall the adjoining rainwater gully was observed to be split open but completely blocked with water which was spilling over the sides into the surrounding ground.

The likely causes of the above observed damage are discussed in detail in Section 3.0. This includes the likelihood of ground subsidence due to water inundation (i.e. excessive ground water washing soil fines from under the foundations, leaking drains, frost heave) and water removal (i.e. tree growth / root action, droughts). There is an evident problem with the below ground drainage in the adjoining hardstandings. The road gulley adjoining the hall entrance lobby quickly flooded during a rainfall event in March 2025 during the surveys. Other evidence includes the apparent settlement of the Tarmacadam hardstanding where it abuts the walls to the building entrance and in the rear car park.

Overall, the principal loadbearing structure of Water Lane Hall appears to be doing well for its age, particularly given that it has been exposed to prolonged water ingress together with partially unheated internal spaces. However the suspected ground subsidence over the full footprint of the building is a concern due to the range of evident associated defects to the building façade(s) and internal finishes. Pending the various necessary investigations to confirm the cause(s) of the damage, one of the principals of repair may need to be foundations strengthening. When movement is or is likely to become excessive so that the use or safety of the building is compromised, then underpinning may have to be considered. This is usually achieved by digging underneath shallow footings and pouring concrete to extend the bottom of the foundations down to a more stable stratum and below the influence of any live tree roots.

It is essential to determine whether the cause(s) of the ground movement have ceased and are unlikely to recur. In these cases, repairing the damage alone may be a sufficient outcome. Where the rate and total magnitude of anticipated ground movement is continuing to threaten the structural strength, stability or integrity of the building during its required lifespan whose economics doesn't warrant periodic repairs and redecoration, then strengthening the foundations is recommended. Recurring open cracks in walls and at roof junctions caused by progressive building movement allow water to penetrate the building causing adverse damage to the structure and fabric.

The current key risks are water ingress into the property and consequent damp-related defects. It is evident that defects in the roof coverings and rainwater goods have allowed water to enter through the roof and walls which is accelerating the decay of the structural timber roof and floor elements and the masonry walls. The localised structural (and cosmetic) problems in the building need further investigation before repairs can be specified with confidence.

Although not all parts of the main hall roof structure were fully visible, the primary timber construction appeared sound with no evident signs of decay or significant movement. The direct cause(s) of the widespread cracking to the side walls of the hall where the roof trusses are supported is not fully understood without further investigation. Roof spread from the roof trusses imparting lateral load onto the walls is possible due to the geometry of the trusses whose feet are not tied by a horizontal chord (as shown in Figure 4).

We were unable to establish if the roof spaces and roof coverings are suitably ventilated. Some areas of the roof will benefit closer examination where they have been exposed to water ingress. Externally, the plain clay tiles to the pitched roof portions of the roofs, lead flashings and the flat roof coverings are generally age-expired with numerous loose, damaged or missing tiles.

The building exhibits localised areas of damp penetration, which may have initiated wet rot and dry rot related decay. This will require the appropriate specialist investigations, and if necessary, treatments to prevent further decay and deterioration of the timber carcassing. It is suggested that an independent timber condition survey specialist be commissioned to undertake a survey of the timber condition at the property, including an assessment of damp penetration and retained moisture in the masonry masses. Once engaged, the timber specialist can advise on the future control and eradication of damp and decay.

The western section of a tall freestanding solid brickwork masonry boundary wall between Water Lane Hall and the adjoining supermarket car park has distorted beyond the generally considered safe limits of wall verticality. The wall leans towards the pavement that leads to the supermarket and car park. In Section 3.0 we make urgent recommendations for the wall to be temporarily propped and protected until permanent remedial repairs can be agreed and implemented. The ownership of the boundary wall is not known, or whether it is listed (or locally listed). This will need to be understood before executing permanent repairs or rebuilding parts of the wall.

AECOM have produced a specification for a CCTV drainage survey of the foul and surface water drainage system, which will inform the condition of the drainage network, enabling any repairs/replacements to be specified.

Appendix A

Photographs from Structural Visual Inspection

AECOM 30 PreparedFor: East Herts District Council

Appendix A Visual Structural Inspection Report, Section 3.0 (Observations) Refers View on two entrance and stair lobbies (NW & SW) with visible diagonal brickwork cracking circled EX-2 EX-1 Blocked yard gulley outside entrance lobby (NW) during heavy rainfall EX-4 EX-3 North elevation of ground floor WCs. Diagonal brickwork cracking above, below and to side of North elevation of NW entrance lobby window cill

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Water Lane Hall Visual Structural Inspection – Photographs East Herts District Council





EX-5 North elevation of ground floor WCs and office rooms at first floor. Brickwork cracking below window cill (arrowed), damp in wall corner adjoining 1960s extension (circled)

East elevation facing the hall's private car park (parlour room and new room at first floor)



East elevation facing the hall's private car park (rear of stage and gable wall to hall).



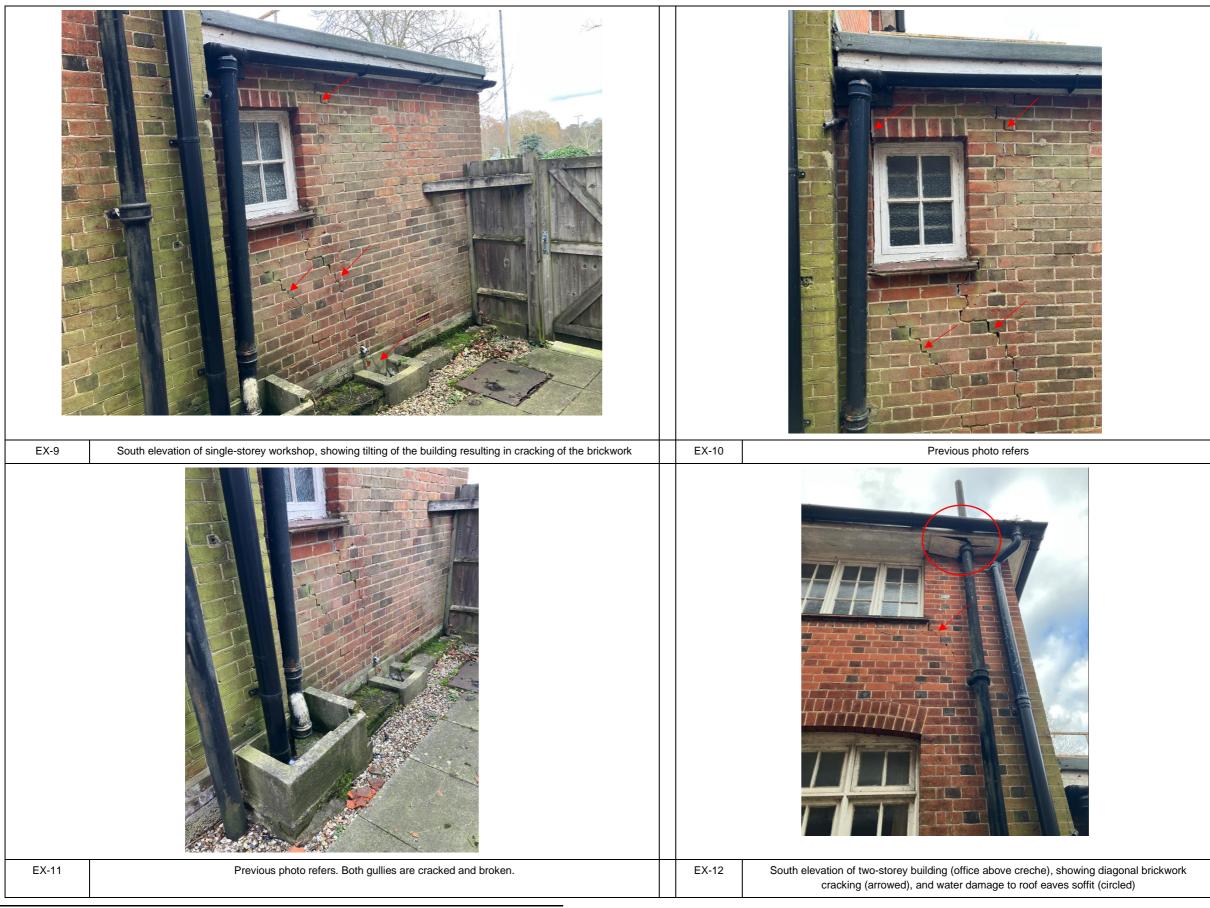
East elevation facing the hall's private car park (ground floor workshop and office at first floor). Damp in external wall above ground level (circled)

EX-8

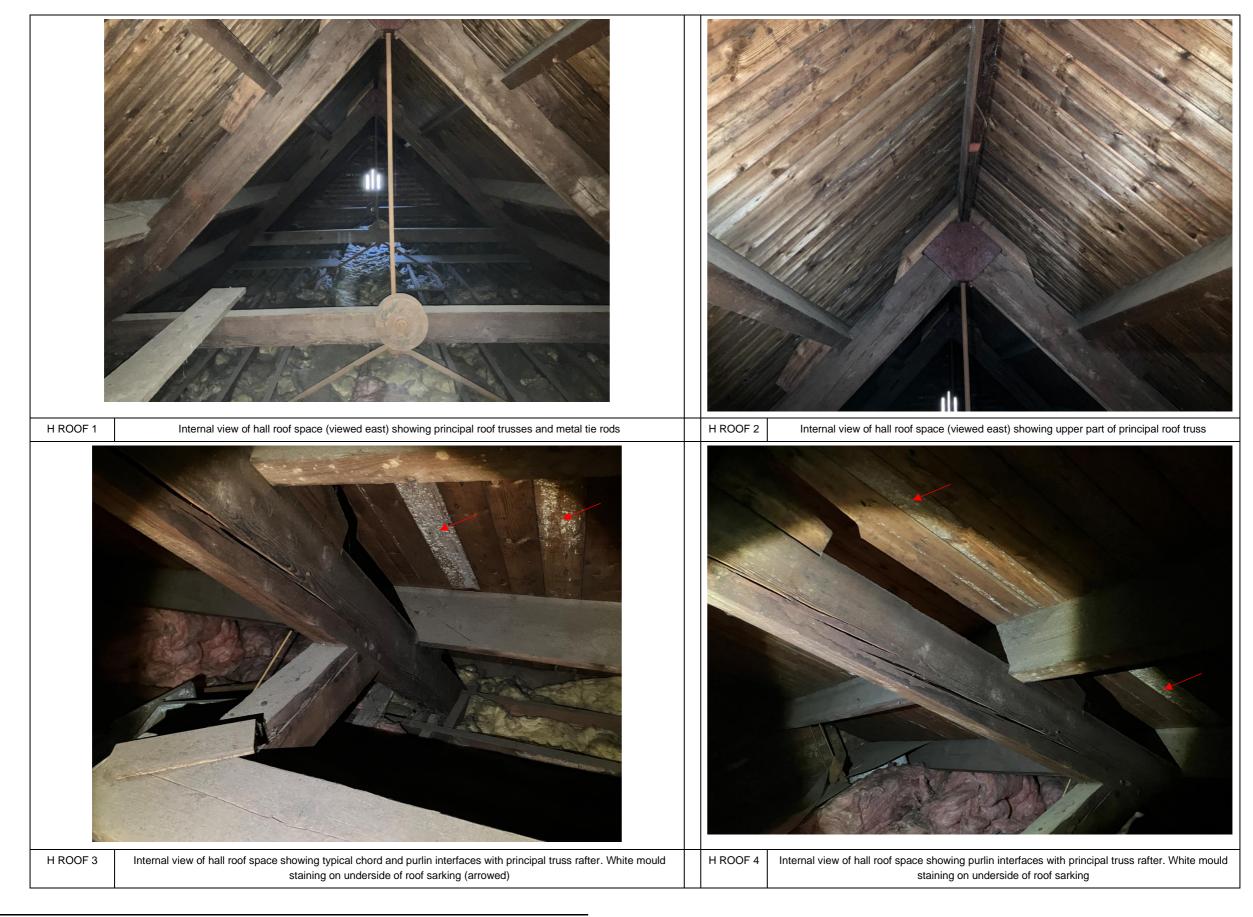
CONDITION REPORT AECOM

EX-7

Water Lane Hall
Visual Structural Inspection – Photographs
East Herts District Council











H ROOF 5

Internal view of hall roof space showing typical chord and purlin interfaces with principal truss rafter. Roof purlin interface with hall gable wall on west elevation

Interior of hall from gallery, viewed to the east



H INT 2

Internal view of hall roof space showing typical chord and purlin interfaces with principal truss rafter. Roof purlin interface with hall gable wall on west elevation

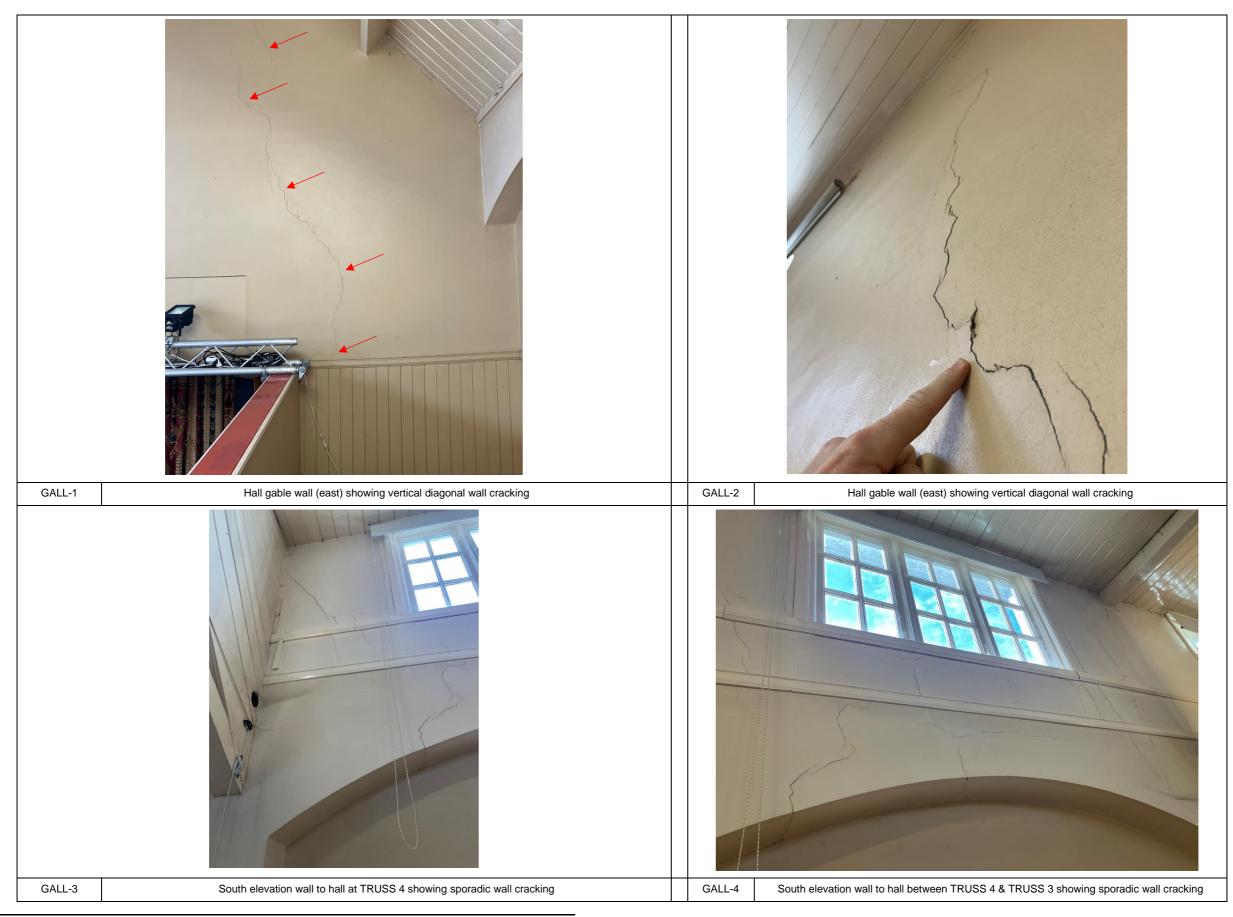




Interior of hall from ground floor, viewed to the west

H INT 1





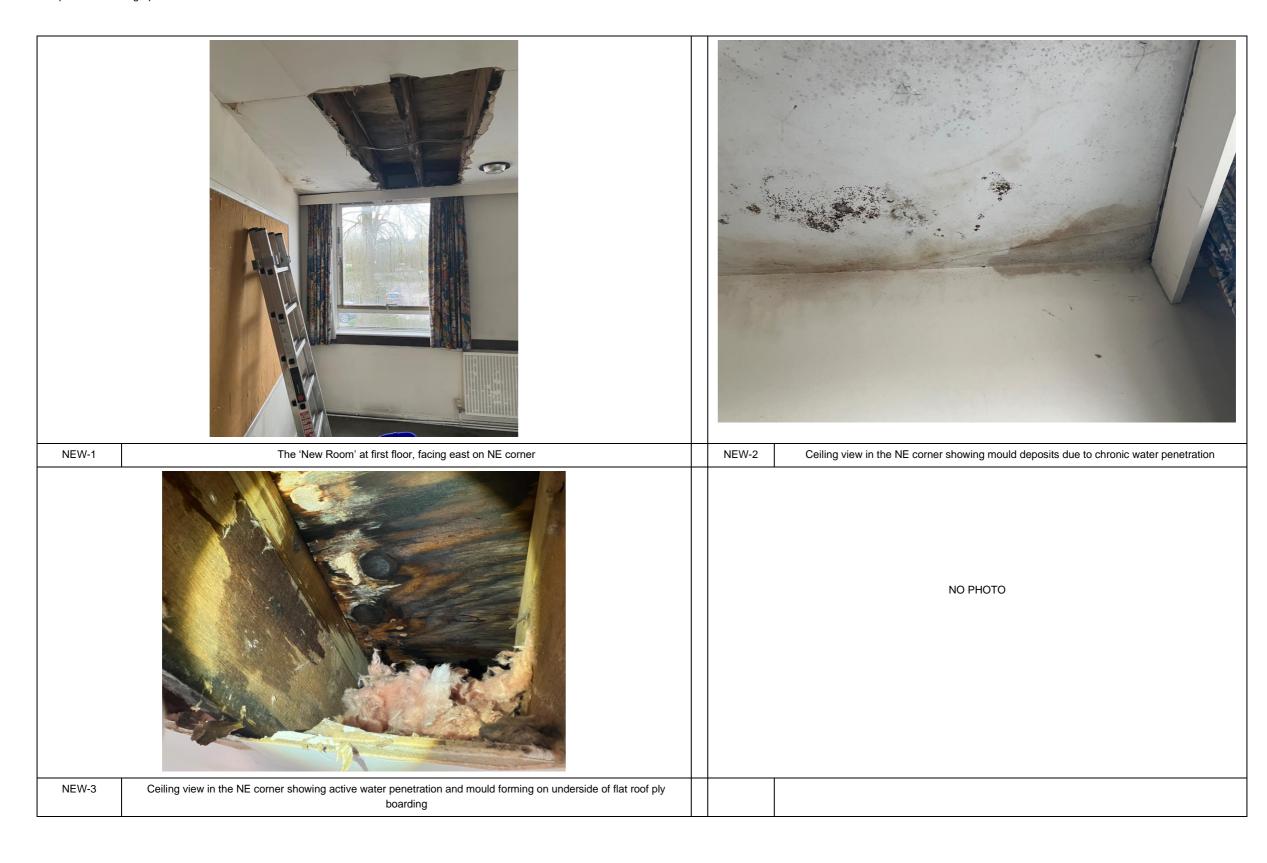


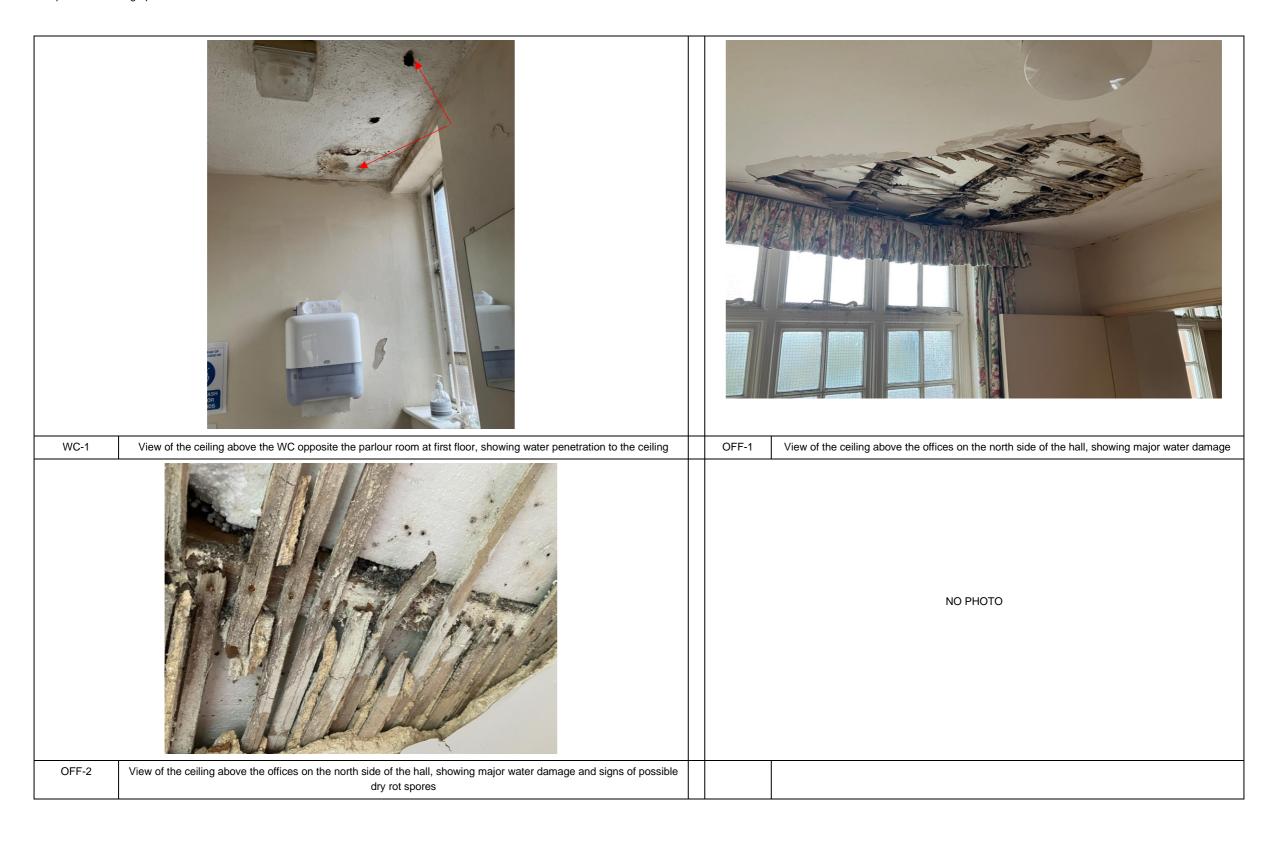




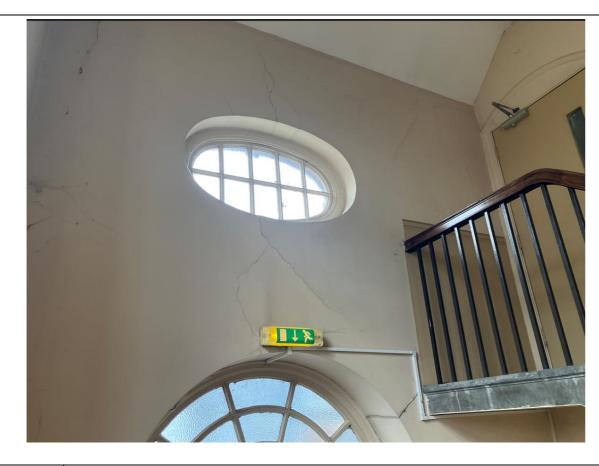


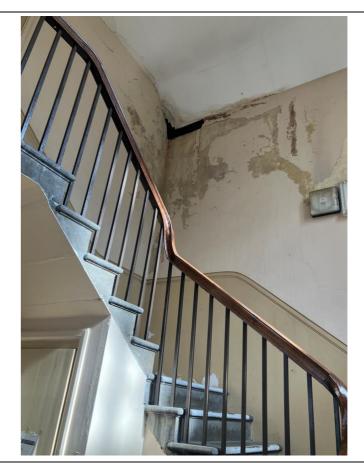






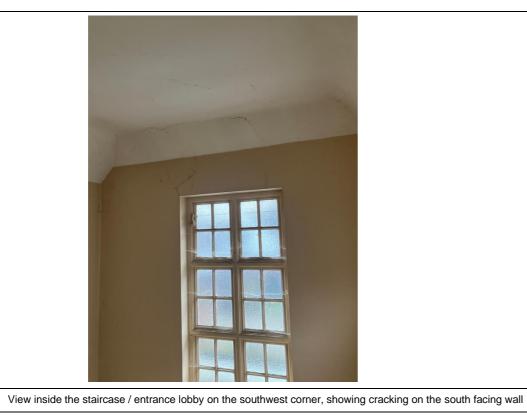
SW-2





SW-1 View inside the staircase / entrance lobby on the southwest corner, showing cracking on the west facing wall

View inside the staircase / entrance lobby on the southwest corner, showing water damage to the internal east wall

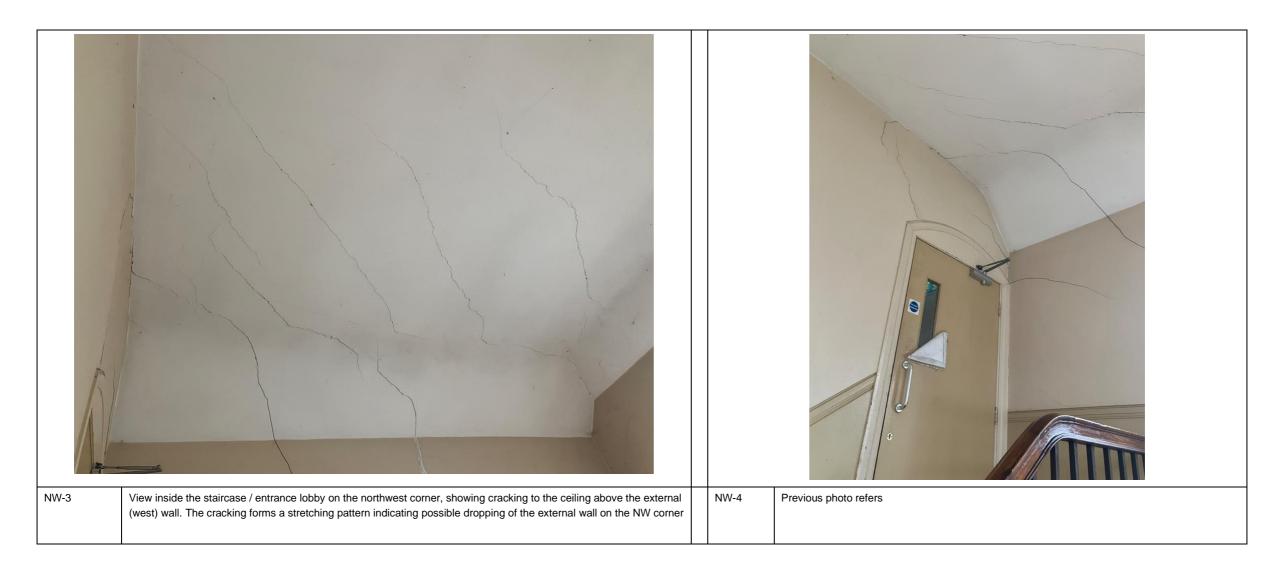


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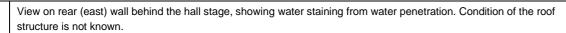
SW-3





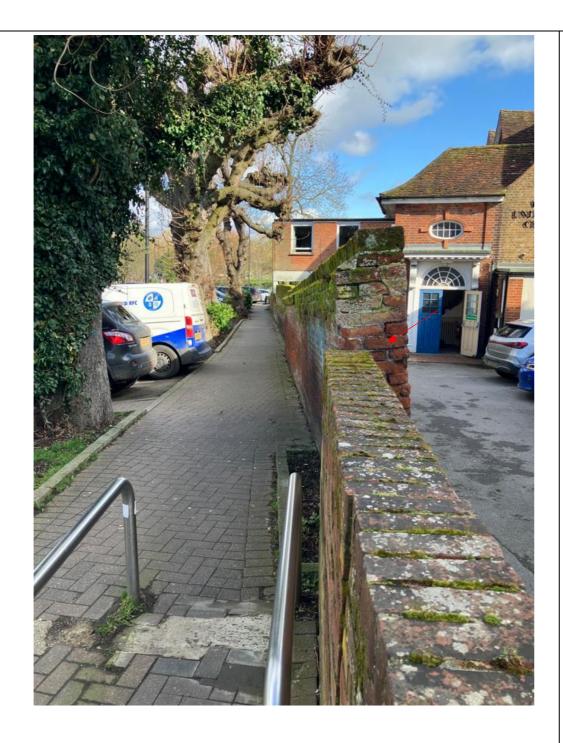
ST-1







View looking northeast on the freestanding brickwork boundary wall between Water lane Hall and the adjoining car park







EXT W2

View looking east on the freestanding brickwork boundary wall between Water lane Hall and the adjoining public car park. The wall with red brickwork is leaning adversely towards the path accessing the supermarket. **This is a health and safety hazard.**

EXT W3

Previous photo refers

CONDITION REPORT

AECOM

End of Section			

Appendix B

Building Fabric Visual Inspection Report

AECOM 31 PreparedFor: East Herts District Council

Appendix C

Mechanical, Electrical and Public Health (MEPH) Visual **Inspection Report**

Appendix D

Below Ground Drainage CCTV Survey Specification and TWUL Statutory Records

Appendix E

Geomatic Surveys, including Site Topographical Survey and Verticality and Spot Level Surveys

PreparedFor: East Herts District Council

Appendix F

Cost Management Services. Rough Order of Cost Report