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Tan y Ffordd, Ruthin Road, Bwlchgwyn

Structural Appraisal Report

June 2025

Job No. 2025/130

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Appendix A – Architect's Drawings

1.0 Executive Summary

The property extends over two storeys and generally comprises a double pitched roof with slated finishes supported off a purlin and rafter form spanning between the elevations and internal load bearing walls. First floor construction comprises timber boards over regularly spaced joists. Ground floor construction comprises quarry tiles. The elevations are constructed from squared masonry with additional render finishes to the side and rear elevations. Internal walls are of brick and masonry construction.

A single storey lean-to extension is provided on the right hand side elevation containing a bathroom and lobby. The roof is finished with concrete tiles over rafters spanning between the original property and the external walls. External walls are constructed from cavity blockwork with an external render finish. Ground floor construction comprises a solid slab.

Foundation type and depth were not proven. Given the age of the property, it is assumed that shallow masonry spread foundations are present. Foundations to the extension are assumed to comprise mass concrete strip footings.

The inspection was carried out during the afternoon of Monday 2nd June 2025.

The overall condition of the property is considered to be fair/poor.

The original part of the property was constructed during the 19th century from squared masonry with quarry tiled floors. This part of the property is suffering from rising and penetrative damp which is not untypical of properties of this age. The walls and floors are not insulated and only a nominal amount of insulation is provided within the roof void. It is also apparent that the rear part of the property has suffered from historic settlement.

The date of construction for the side extension is not known. However, there is evidence of rising damp to the external walls within the bathroom. Given the likely age of the extension, insulation within the floor and external walls will only be nominal. Quilt insulation is provided within the roof void, but this is only of nominal thickness.

The property is currently heated using a combination of solid fuel, oil and electricity. Due to the poor thermal performance of the building fabric, heat losses are excessive. The inability to adequately heat the property combined with the damp in the interior has promoted mould growth in several rooms which can lead to long term health issues. Thermal performance can be improved by dry lining external walls and the replacement of the ground floors. However, due to limited space within the roof void, adding additional layers of quilt insulation to improve the thermal performance of the roof will have limited efficacy. All of these measures will reduce the size of the living accommodation.

Rising damp is normally addressed by the installation of sheet or chemical courses within the external and internal walls. Given the thickness of the original masonry walls, installation of an effective damp course will be problematic. Injection of chemical courses in rubble walls has had variable success. Therefore, the most appropriate method for restricting rising damp within the property will be the provision of an ‘egg crate’ membrane extending up from floor level.

The roof shows slight sags between supports indicative of damp penetration causing creep. It is apparent that the roof finishes to the front half have been renewed in the past. However, slipped and missing slates are apparent indicative that nail fatigue is endemic. There is evidence of daylight through finishes and evidence of minor leaking in the rear part. Therefore, the roof finishes are considered to be life expired and will need to be replaced.

The weather conditions preceding the inspection were unseasonably warm and dry over an extended period. This will have reduced the severity of the damp noted within the property at the time of inspection with anecdotal evidence suggesting that the damp issues are much more severe during winter months.

Implementing the necessary repairs and improvements will significantly reduce the floor area within the property which already limits accessibility for the disabled resident. Additionally, there is inadequate provision for the disabled resident's needs – i.e. step free access and ground floor accommodation for the resident and full time carer. The cost of making the property viable in the future by improving thermal efficiency and ensuring it is free from damp is considered to be prohibitive.

We consider that the existing property is beyond economic repair. We would therefore recommend that the property be demolished so that a new energy efficient dwelling can be constructed at the site.

Report Compiled by:

[redacted]

Andrew Hannett
BEng(Hons), CEng, MICE

2.0 Client's Brief

This report was commissioned by Nick Roberts in support of the proposed planning application to replace the dwelling. The purpose of the report is to identify the current condition of the property and to determine the extent of repairs and upgrades required to ensure viability in the long term.

3.0 Inspection

3.1 General

The property extends over two storeys and generally comprises a double pitched roof with slated finishes supported off a purlin and rafter form spanning between the elevations and internal load bearing walls. First floor construction comprises timber boards over regularly spaced joists. Ground floor construction comprises quarry tiles. The elevations are constructed from squared masonry with additional render finishes to the side and rear elevations. Internal walls are of brick and masonry construction.

A single storey lean-to extension is provided on the right hand side elevation containing a bathroom and lobby. The roof is finished with concrete tiles over rafters spanning between the original property and the external walls. External walls are constructed from cavity blockwork with an external render finish. Ground floor construction comprises a solid slab.

Foundation type and depth were not proven. Given the age of the property, it is assumed that shallow masonry spread foundations are present. Foundations to the extension are assumed to comprise mass concrete strip footings.

Elevations and rooms are referenced on Architect's Drawings – refer to Appendix A.

The inspection was carried out during the afternoon of Monday 2nd June 2025. The weather during the inspection was warm and dry and followed an extended period of unseasonably dry and warm weather.

The inspection comprised a visual inspection of those elements readily visible from ground level and from within the property. No excavations were undertaken to uncover buried elements and any notes on the condition of these elements are made based on the visible condition of the property. Testing requiring the use of specialist equipment or training, e.g. electrical systems, gas appliances, water systems, etc., has not been undertaken. Manhole covers were not lifted and drains were not tested. No internal nor external finishes were removed and therefore it is not possible to confirm whether hidden elements are free from defect.

3.2 EXTERNAL INSPECTION

3.2.1 Front Elevation

The elevation comprises square masonry to full height. Windows comprise double glazed units in PVCu frames with a timber door and frame. The roof over is finished with slate.

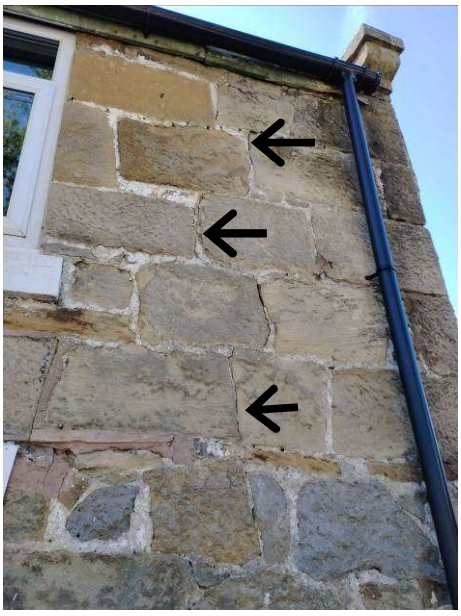
The overall condition of the elevation is considered to be good/fair.

A central door opening has been infilled in the past.



Front Elevation.

A vertical crack extends through perpends running parallel to the right hand side elevation. The cracking was noted as up to 2mm wide at eaves level.



Cracking to right hand side of elevation.

The pointing is lime based and has receded from the face in numerous areas. The remaining pointing was noted as soft when probed. Several areas have been repointed in cement pointing all of which appeared sound

The elevation was noted as generally straight and plumb.

The roof over shows evidence of slight sagging between supports. There is evidence of slipped and missing slates which would suggest that nail fatigue is endemic. The guttering and downpipes were intact. The downpipe would appear to discharge onto the ground adjacent to the elevation.

3.2.2 Left Hand Side Elevation

The elevation comprises render finishes to front half and squared masonry to the rear half. Chimneys are constructed from brickwork with render finishes. A single window comprises double glazed units in a PVCu frame.

The overall condition of the elevation is considered to be fair.



Left Hand Side Elevation.

The exposed masonry has been repointed using cement mortar on the past. The workmanship is variable with some areas fallen away.

Both chimney stacks show significant leans. A sapling was noted growing from the front stack. Disturbed brickwork was apparent locally indicating that the vegetation is now established.

The elevation to the front half was noted as generally straight and plumb. The elevation to the rear half shows a significant outwards lean above first floor level.



Sapling to chimney stack.



Outwards lean to rear half of elevation.

The downpipe from the valley discharges onto the ground adjacent to the elevation.

3.2.3 Rear Elevation

The elevation comprises render to full height. Windows comprise double glazed units in PVCu frames. The roof over is finished with slate.

The overall condition of the elevation is considered to be good/fair.



Rear Elevation.

Random cracking was apparent throughout the render finishes with missing areas noted around first floor window openings. Hollow areas were apparent throughout. The defects are indicative of age related addling.



Missing areas and cracking to render.

The elevation was noted as generally straight and plumb.

The roof over shows evidence of slight sagging between supports. There is evidence of slipped and missing slates which would suggest that nail fatigue is endemic. Significant sections of the guttering were missing. The downpipe would appear to discharge onto the ground adjacent to the elevation.

3.2.4 Right Hand Side Elevation

The elevation comprises painted render to full height. The roof over the extension is finished with concrete tiles.

The overall condition of the elevation is considered to be fair.



Right Hand Side Elevation.

Cracking was noted extending down form the valley. The cracking was noted as up to 2mm wide. Missing render finishes were apparent to both chimney stacks with some disturbed and degraded brickwork exposed. The chimney stack to the rear of the elevation shows a significant outwards lean.



Cracking extending down from valley.



Outwards lean to rear chimney stack.

The elevation was noted as generally straight and plumb.

The downpipe from the valley discharges onto the extension roof. The guttering and downpipes to the extension were intact. The downpipe would appear to discharge onto the ground adjacent to the elevation.

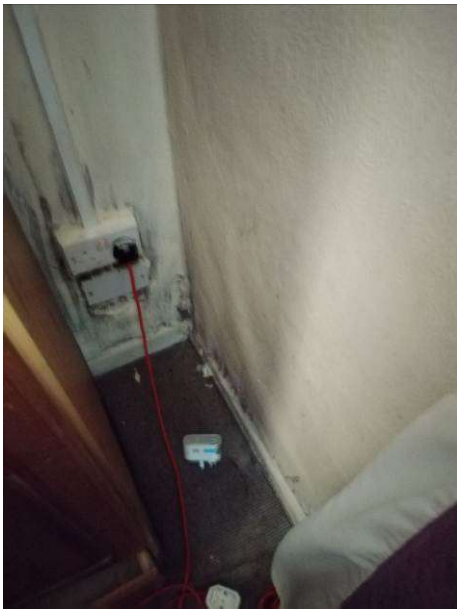
3.3 INTERNAL INSPECTION

3.3.1 Ground Floor

The ground floor accommodation comprises a bedroom, dining room, kitchen and living room within the original part and a bathroom and lobby within the extension. The room are generally finished with painted plaster to ceilings, painted paper to the walls and quarry tiles to the floor. Carpet finishes are provided to the floor in the bedroom.

Areas of hollow plaster finishes were apparent to all walls. Cracking is apparent to ceiling and wall finishes within the rooms. These defects are indicative of age related addling of plaster finishes and is not uncommon in properties of this age.

Mould spotting was apparent to wall and ceiling finishes with the bedroom. Peeling paper finishes and broken plaster was apparent at low level to the external and internal walls. This is indicative of rising damp.

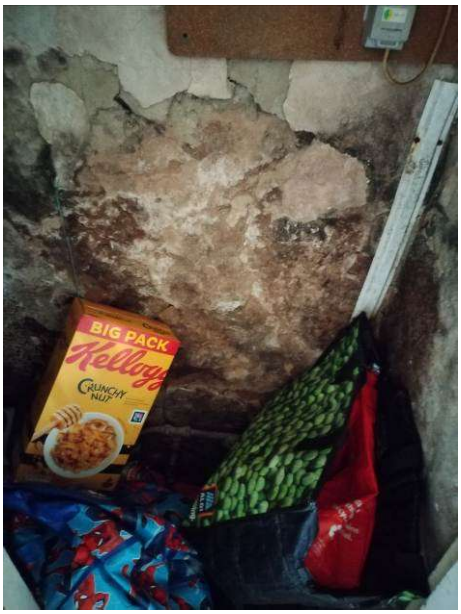


Mould and peeling paper finishes to external wall.



Broken plaster and missing finishes to internal wall.

Very severe mould and broken plaster was apparent within the kitchen cupboards on the external wall. This would confirm the extent of rising and penetrative damp through the external walls.



Peeling paint finishes and degraded plaster to wall.

Evidence of rising and penetrative damp is apparent within the bathroom extension indicated by loose and missing tiling and peeling paint finishes.



Missing tiled finishes at low level.



Peeling paint finishes at low level.

The walls were noted as slightly uneven but generally plumb within acceptable limits. The floor in the front half was noted as generally level whilst the floors at the rear show a slope towards the rear elevation.

3.3.2 First Floor

The first floor accommodation comprises four bedrooms and a toilet all accessed off a central landing. All of the rooms are finished with painted plaster to walls and ceilings and carpet to the floors.

Areas of hollow plaster finishes were apparent to all walls. Cracking is apparent to ceiling and wall finishes within the bedrooms. These defects are indicative of age related addling of plaster finishes and is not uncommon in properties of this age. Separation is apparent between the stud toilet walls and the rear elevation.



Cracking to ceiling and wall finishes.



Separation between toilet wall and rear elevation.

Mould spotting was apparent to wall and ceiling finishes with all of the bedrooms. This is indicative of penetrative damp through external walls and a lack of insulation within the ceilings. The pattern of spotting would indicate that the original lath and plaster finishes are still present. Very severe mould spotting was apparent within a cupboard in a rear bedroom. Water runs were also apparent which may indicate that the roof is leaking.



Typical mould spotting to walls and ceiling.



Very severe mould spotting and water runs within cupboard.

Cracking is apparent extending down from the valley beam over the landing. The cracking was noted as up to 4.5mm wide with hollow plaster finishes noted either side.

The cracking is indicative of slight movement of the rear section of the property.

A distinct hump is apparent in the landing floor in line with the central spine wall.



Cracking extending down wall from valley beam.

The walls were noted as slightly uneven but generally plumb within acceptable limits. The floor in the front half was noted as generally level whilst the floors at the rear show a slope towards the rear elevation.

3.3.3 Roof Void

The roof void is accessed through hatches located in the toilet and above the staircase. It was not possible to inspect the full roof void due to limited headroom and internal walls extending to rafter level.

The roof construction throughout comprises a traditional purlin and rafter form spanning between the elevations and load bearing internal walls. The roof is double pitched with a valley extending centrally across the property. Within the rear void, the original torching below the slates is visible. Within the front void, a bitumen membrane is provided which would suggest that the slated finishes have been renewed in the past.



Rear roof void.



Front roof void.

Staining is apparent to the majority of timbers indicative of historic weather penetration with all areas noted as dry at the time of inspection. Daylight was visible within the rear void adjacent to

the left hand gable elevation. This is indicative of failed or missing flashings. Minor sag is apparent in the ridge lines between supports. This is not uncommon in older properties where timbers can be undersized and subject to long term creep.

4.0 Conclusions, Discussion and Recommendations

The overall condition of the property is considered to be fair/poor.

The original part of the property was constructed during the 19th century from squared masonry with quarry tiled floors. This part of the property is suffering from rising and penetrative damp which is not untypical of properties of this age. The walls and floors are not insulated and only a nominal amount of insulation is provided within the roof void. It is also apparent that the rear part of the property has suffered from historic settlement.

The date of construction for the side extension is not known. However, there is evidence of rising damp to the external walls within the bathroom. Given the likely age of the extension, insulation within the floor and external walls will only be nominal. Quilt insulation is provided within the roof void, but this is only of nominal thickness.

The property is currently heated using a combination of solid fuel, oil and electricity. Due to the poor thermal performance of the building fabric, heat losses are excessive. The inability to adequately heat the property combined with the damp in the interior has promoted mould growth in several rooms which can lead to long term health issues. Thermal performance can be improved by dry lining external walls and the replacement of the ground floors. However, due to limited space within the roof void, adding additional layers of quilt insulation to improve the thermal performance of the roof will have limited efficacy. All of these measures will reduce the size of the living accommodation.

Rising damp is normally addressed by the installation of sheet or chemical courses within the external and internal walls. Given the thickness of the original masonry walls, installation of an effective damp course will be problematic. Injection of chemical courses in rubble walls has had variable success. Therefore, the most appropriate method for restricting rising damp within the property will be the provision of an 'egg crate' membrane extending up from floor level.

The roof shows slight sags between supports indicative of damp penetration causing creep. It is apparent that the roof finishes to the front half have been renewed in the past. However, slipped and missing slates are apparent indicative that nail fatigue is endemic. There is evidence of daylight through finishes and evidence of minor leaking in the rear part. Therefore, the roof finishes are considered to be life expired and will need to be replaced.

The weather conditions preceding the inspection were unseasonably warm and dry over an extended period. This will have reduced the severity of the damp noted within the property at the time of inspection with anecdotal evidence suggesting that the damp issues are much more severe during winter months.

Implementing the necessary repairs and improvements will significantly reduce the floor area within the property which already limits accessibility for the disabled resident. Additionally, there is inadequate provision for the disabled resident's needs – i.e. step free access and ground floor accommodation for the resident and full time carer. The cost of making the property viable in the future by improving thermal efficiency and ensuring it is free from damp is considered to be prohibitive.

We consider that the existing property is beyond economic repair. We would therefore recommend that the property be demolished so that a new energy efficient dwelling can be constructed at the site.

5.0 Limitations and Liability

This report has been prepared for the exclusive use of the commissioning party and unless otherwise agreed in writing by Andrew Hannett Limited, no other party may use, make use of or rely on the contents of the report. No liability is accepted by Andrew Hannett Limited for any use of this report, other than for the purposes for which it was originally prepared and provided.

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The timber or other parts of the building which are covered, unexposed or inaccessible to the Structural Engineer without the assistance of a ladder in excess of 3m have not been inspected. The report does not cover the condition of the dpc, possible damp penetration or condensation unless specifically highlighted as part of the inspection. Where the property was furnished at the time of inspection those elements of the structure covered over have not been fully inspected. Therefore, it is not possible to confirm that those elements are free from defect.

No excavations were undertaken to uncover buried elements or foundations and any notes on the condition of such elements are made based on the visible condition of the property. No intrusive testing was carried out. Manhole covers were not lifted and drains were not tested. Testing requiring the use of specialist equipment or training, e.g., electrical systems, gas appliances, water systems, etc., has not been undertaken.

This report is not intended to be an exhaustive list of all defects and only significant structural faults which could lead to instability of the structure in the present or future have been reported. Further defects may become apparent during more extensive investigation or during future refurbishment works.

Detailed calculations to determine the adequacy of structural members are outside the scope of this report and have not been undertaken. However, evidence of distress as a result of overloading or deterioration will be identified so that provision for additional works can be made during any future refurbishment scheme.

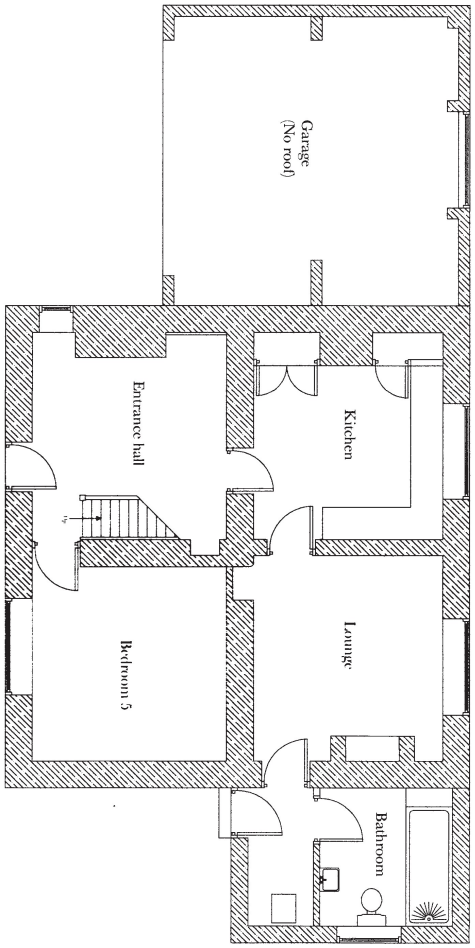
The report shall be solely used by the Client to determine the extent of works to the property and liability in this respect will be limited to the instructing Client.

Nothing in the Contract confers nor purports to confer on any third party any benefit nor any right to enforce any terms of this Contract pursuant to the Contracts (Rights of Third Parties) Act 1999.

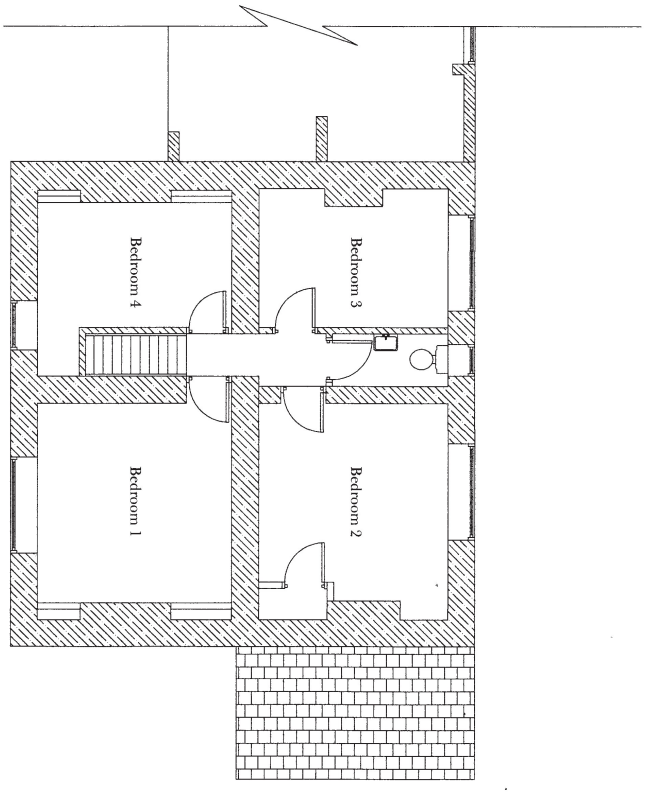
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Appendix A – Architect's Drawings

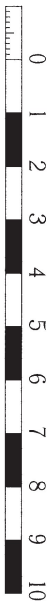
PROPOSED NEW DWELLING AT TANYFFORDD RUTHIN ROAD, BWLCHGWYN, WREXHAM, LL11 5UU.	Date June 2025	Drawing No. 996/1
	Scale 1 : 100 at A3	Revisions



EXISTING GROUND FLOOR PLAN



EXISTING FIRST FLOOR PLAN



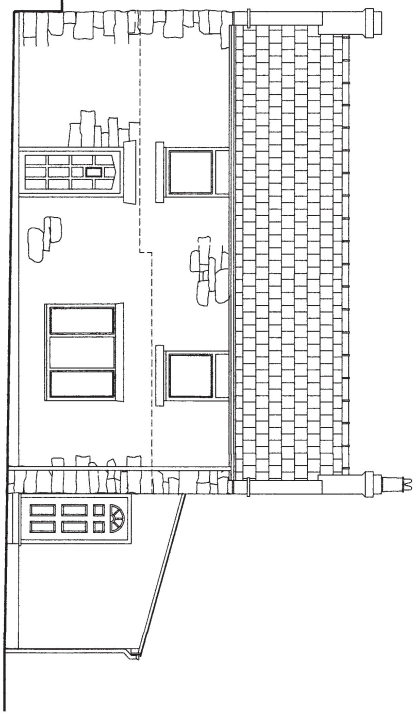
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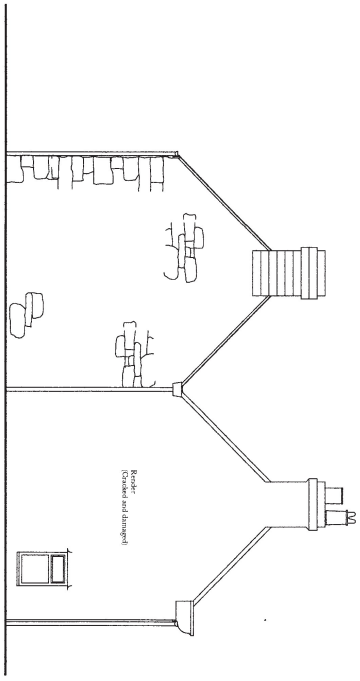
PROPOSED NEW DWELLING AT TANYFFORDD RUTHIN ROAD, BWLCHGWYN, WREXHAM, LL11 5UU.

Date June 2025	Drawing No. 996/2
Scale 1 : 100 at A3	Revisions

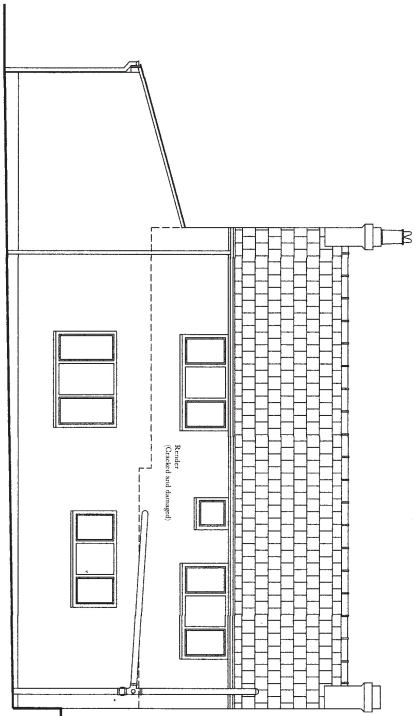
EXISTING FRONT ELEVATION



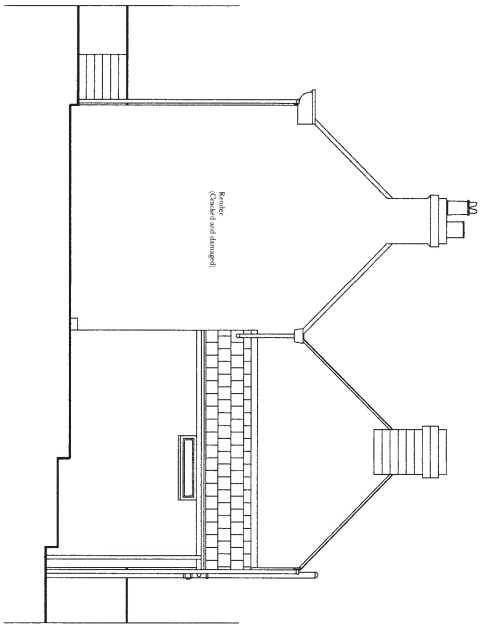
EXISTING SIDE ELEVATION

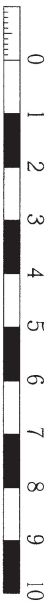


EXISTING REAR ELEVATION



EXISTING SIDE ELEVATION





Scale 1:100 at A3

EXISTING