

**37 HAMILTON ROAD, TWICKENHAM**  
**For: Hamilton Lofts Ltd.**

**Appendix b**  
**Structural Engineers Report**  
**on Existing Buildings**

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Hamilton Lofts Ltd, 20 Mortlake High Street, London SW14 8JN. 020 8392 6600. Contact: Bill Bailey.





**REPORT REGARDING STRUCTURAL FEASIBILITY**  
**OF**  
**REFURBISHMENT OF EXISTING VICTORIAN BUILDING,S**  
**37 HAMILTON ROAD**  
**TWICKENHAM, TW2**

**DATE**

**MARCH 2005**

**JOB No 04086**

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## 1.0 INTRODUCTION

We were requested by our Client, Frenncastle Management, to visit site and inspect existing Victorian buildings at the above site.

Consideration is being given to proposals to refurbish the buildings as part of a redevelopment of the site.

Within the site, there are two existing Victorian buildings remaining.

The site was originally part of the site of an early Electricity Works and is shown in outline on the Ordinance Survey drawing of 1915. The Electricity Works is again shown on the 1960 Ordinance Survey drawing.

The Ordinance Survey maps and a survey sketch of the two existing buildings are attached to this appraisal as Appendix A.

The current site forms approximately half of the original site of the Electricity Works.

The current site occupies the eastern half of the original Electricity Works whilst the western half of the original site is now occupied by modern electricity distribution plant.

The two remaining Victorian buildings can be described as a house (building 1) and an industrial building (building 2).

The existing warehouse building to the north of the other buildings does not form part of this appraisal.

Photographs of the existing buildings are attached to this appraisal as Appendix B.

### 1.2 General Description of Building 1

Building 1 is best described as a house on an office building, constructed with solid masonry walls externally, with timber floors and studwork partitions internally and a pitched timber roof structure.

Some walls internally are of masonry construction.

The roof is covered with slates which are in good order, with ridge tiles and gable wall flashings also in good order.

It appears that the building has remained weather tight over the years.



### 1.3 General description of Building 2

Building 2 forms part of an original larger industrial building that once continued further to the west across the site of the current electricity distribution plant site.

The existing warehouse building has been truncated literally by cutting the building in the middle and constructing a lightweight blockwork end wall to the truncated building at the west end.

The roof is of curved corrugated iron showing signs of heavy corrosion.

The roof has been over covered with bitumen at various times, which has cracked and led to water ingress.

Water is currently entering the building via dilapidated parapet gutters.

Internally, the building has a ground, first and second floor levels.

The second floor floor is constructed using floor joists laid on their sides and has negligible load carrying capacity.

The first floor is of filler joist construction with extensive cracking to the soffit suggesting that water has corroded the steel elements within the floor.

The ground floor is generally of hard core finish.

Headroom is extremely limited at first and second floor level and is also very low at ground floor level, for an industrial building.



## 2.0 EXCLUSIONS

This report is concerned only with the structure of the premises with regard to possible structural defects and remedial works which may be necessary to remedy such defects.

The conclusions of the report are based on those parts of the building which were accessible and visible.

No cutting away of any finishes was undertaken. Any constructions otherwise obscured were consequently not inspected.

In the absence of visible manifestation of characteristic defects the report assumes that the original construction does not contain materials hazardous to health. Detailed sampling and laboratory testing will be required to establish this conclusively. At this stage we have not been instructed to carry this out.

The foundations to the property were not exposed or inspected.

The drains serving the property were not inspected.

This condition survey concerns itself only with the two existing buildings referred to in section 1 above.



### 3.0 DETAILED FINDINGS

#### Building 1

No significant signs of structural distress were noted to the fabric of building 1 externally.

Brickwork is generally in good order, with pointing generally reasonably maintained.

The pitched slated roof to the building is in good order as are the ridge tiles and gable eaves flashings (some flashings are of lead construction whilst others are of cement construction).

Internally, floors to the upper levels are of timber construction and do not show any signs of distress.

Floors are not bouncy under foot suggesting that the floor joists will be adequate for use under domestic loading without strengthening.

Internally, partition walls are generally uncracked indicating that the building is not affected by any foundation movement.

At ground floor level, floors appear to be of solid construction with no significant signs of damp or moisture ingress.

#### Building 2

Externally, the curved corrugated iron roof is obscured from view behind a parapet gutter.

The roof can be viewed from the valley gutter between building 1 and building 2 (the valley gutter between the two buildings is accessible, well maintained and in good order)

Access to the parapet gutter to building 2 is not possible.

Within the existing building at second floor level, water was noted to be dripping into the second floor space via leaking parapet gutters.

The internal face of the masonry wall is affected by moisture ingress with severe exfoliation of brickwork noted around window reveals



The existing second floor structure consists of a series of steel beams spanning from front to rear of the building, over which have been laid floor joists on their side axes.

The floors are very springy under foot even when simply walking across the floor.

The floors have negligible load carrying capacity and are not capable of supporting domestic superimposed loads.

Headroom is limited at second floor level.

The first floor level would be of mass clinker concrete/ steel filler joist construction and feels robust under foot.

However, when the soffit of the first floor structure (the ground floor ceiling) is viewed from ground floor, a series of linear cracks are visible.

The cracks suggest corrosion may be occurring to the steel elements within the filler joist floor.

The western end wall is of lightweight blockwork construction.

#### **4.0 CONCLUSIONS**

##### **Building 1**

The building is readily refurbishable for use as habitable dwellings.

The building has generally been well maintained and the structure is generally being good order.

No significant signs of structural distress were noted at the time of the inspection section.

No significant signs of rot or decay were noted at the time of the inspection.

The external elevations are generally in good order during no signs of significant structural distress.



## Building 2

The structural fabric of the building does not lend itself to refurbishment.

The building is in a severely dilapidated condition.

At the western end of the building, the building has been cut back with a new end wall been constructed in lightweight blockwork which would require complete replacement.

The roof covering is dilapidated corrugated iron showing signs of corrosion and water ingress. The roof structure consists of a series of tie trusses with a tie less than 2.0 metres above second floor level.

The roof structure would require complete replacement.

There is insufficient headroom at second floor level to accommodated residential use.

The existing second floor structure is unsound and unsafe.

The existing second floor structure would need to be replaced in its entirety to accommodate residential superimposed loads.

The depth of structure at second floor level would increase significantly, further reducing headroom at first floor level below and that second floor level within the building and rendering it not suitable for a residential redevelopment.

The existing first floor structure is of clinker concrete/ filler joist construction and has been affected by moisture ingress.

It is likely that the existing floor structure will not be adequate to carry domestic superimposed loads without replacement.

Allowance should be made for replacement of the existing first floor structure.

The ground floor is of hard core construction and would require complete replacement.

In summary, it is likely that the ground, first, second and roof level constructions will require replacement in their entirety so that a refurbishment is not economically feasible.

The building proportions are small, so that headroom is limited from floor to floor.





It would not be possible to accommodate domestic requirements for headroom and an upgrade of the floor structures to meet current Building Regulations within the existing storey heights.

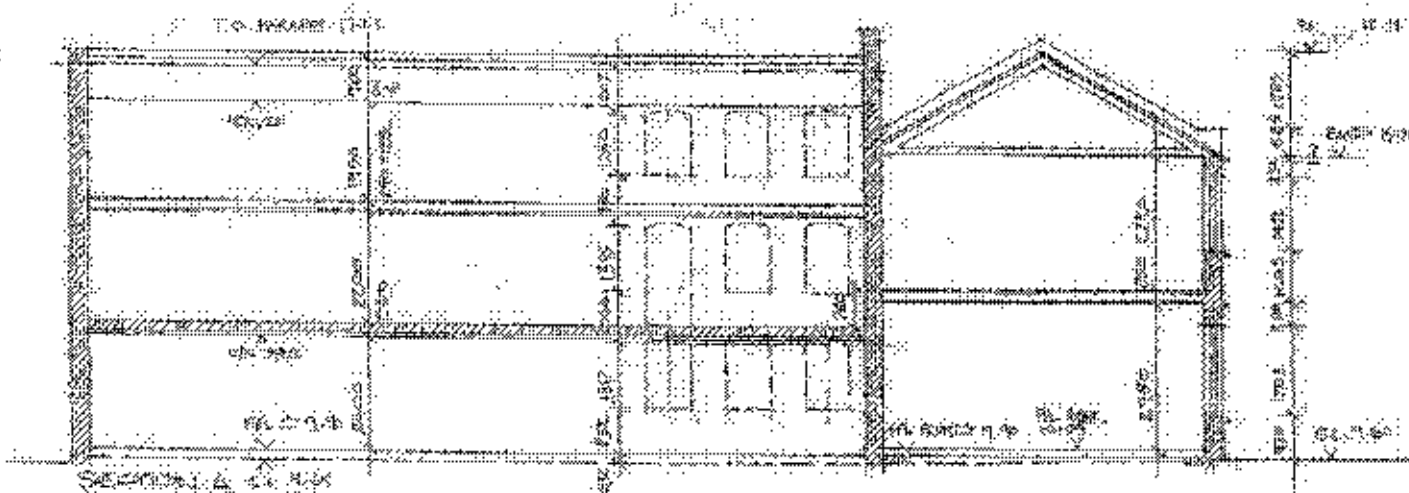
Significant alterations to the external elevations to alter window cills and heads, and a raising of the parapet walls would be required.

Such significant structural alterations to the external elevations, in conjunction with replacement of the internal floor and roof structures render a refurbishment proposal not feasible.

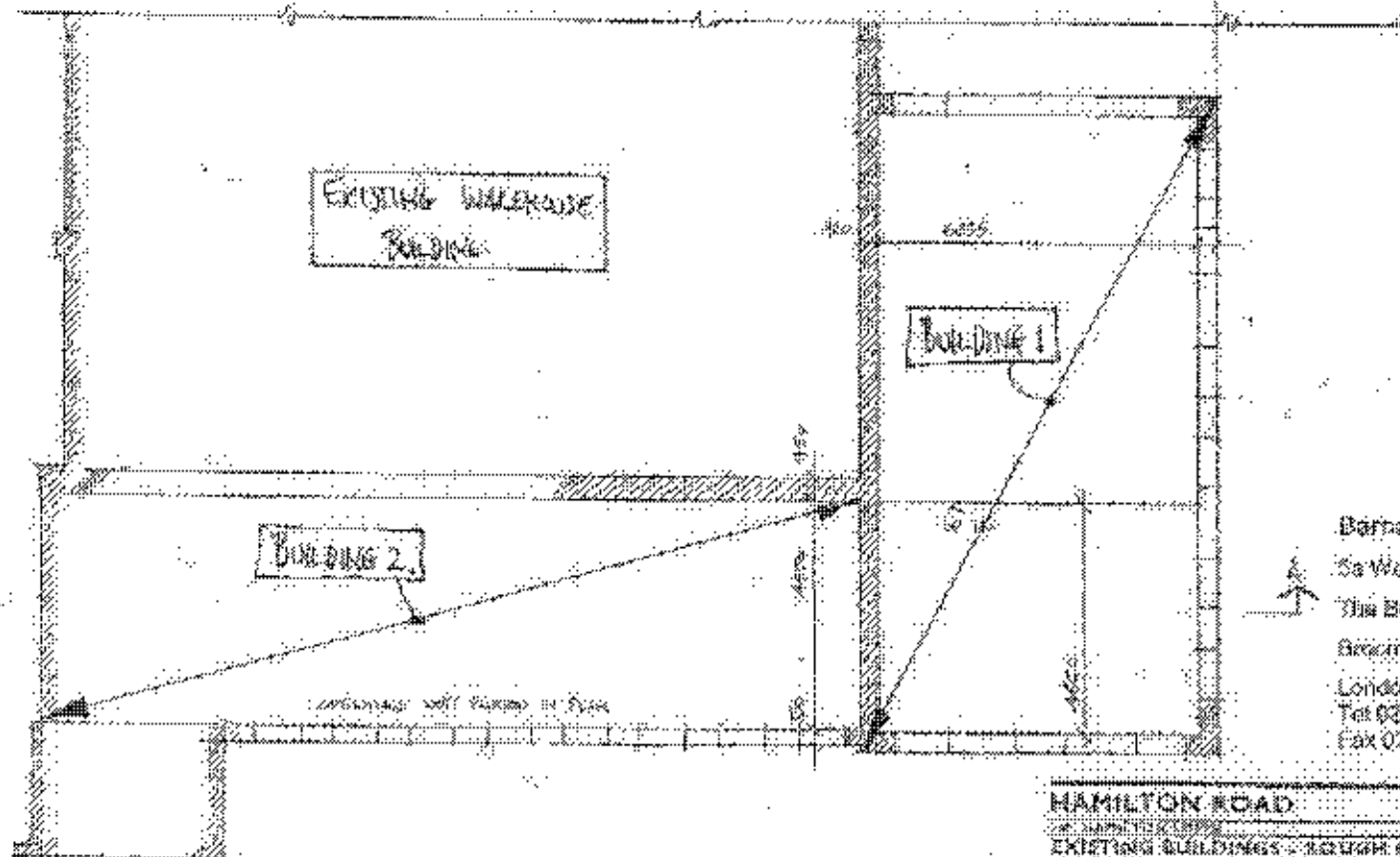
**BA**

APPENDIX A

SITE PLAN SURVEY DRAWING  
ORDINANCE SURVEY DRAWINGS



PLAN AND SECTION  
THRU EXISTING BUILDINGS  
*(NOT TO SCALE)*



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 5a Walsback House  
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 Tel 0208 874 9005  
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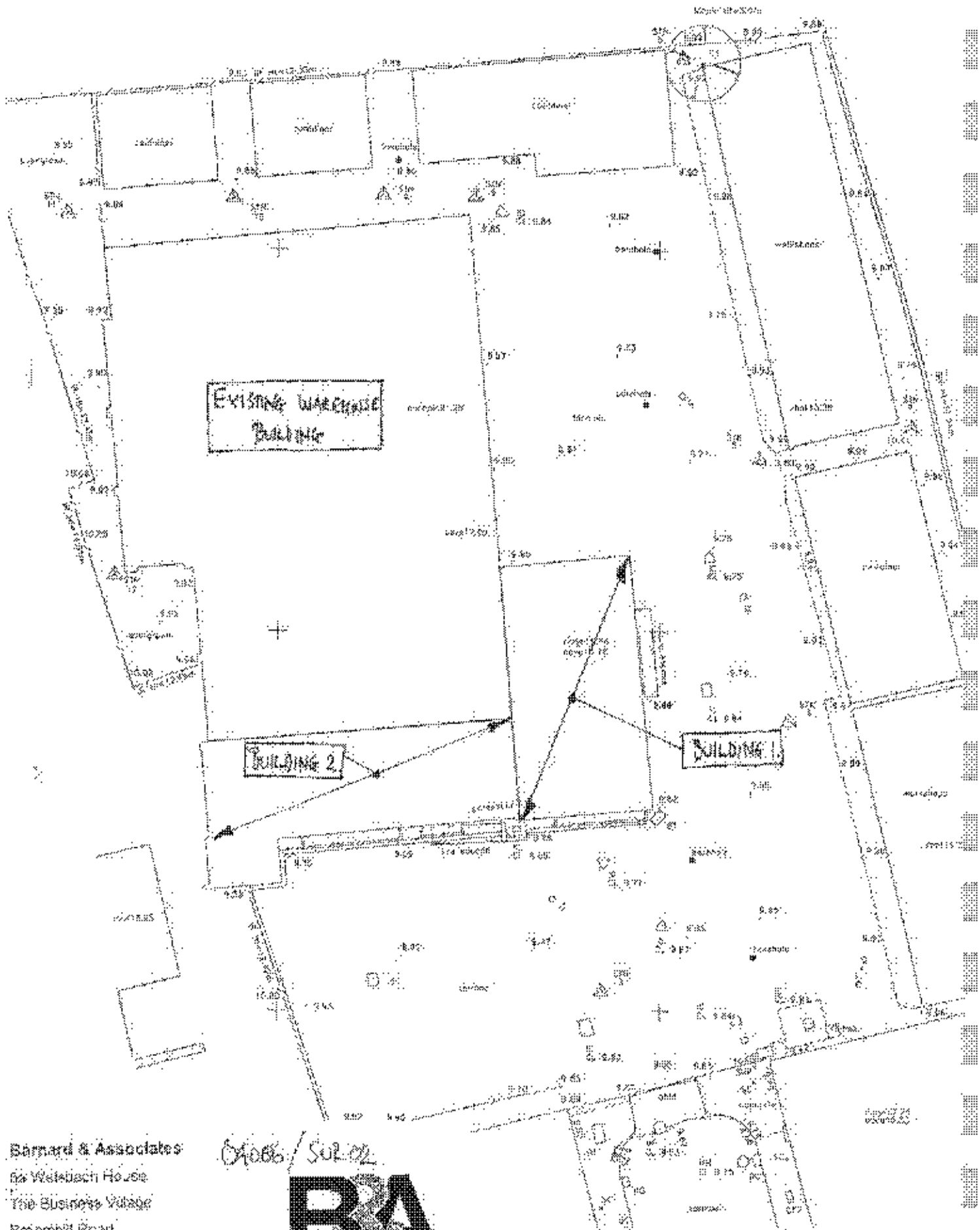


HAMILTON ROAD		DATE: 1999		ACANTHUS ARCHITECTS
EXISTING BUILDINGS - ROUGH FLOT		SCALE: 1/500		
ACANTHUS ARCHITECTS		100 BROAD STREET, LONDON EC2M 2DF		
ACANTHUS ARCHITECTS		100 BROAD STREET, LONDON EC2M 2DF		

2002  
 39  
 100 BROAD STREET, LONDON EC2M 2DF

BY TIME 09.00.95-10.01

SITE PLAN AS EXISTING (1:1250)



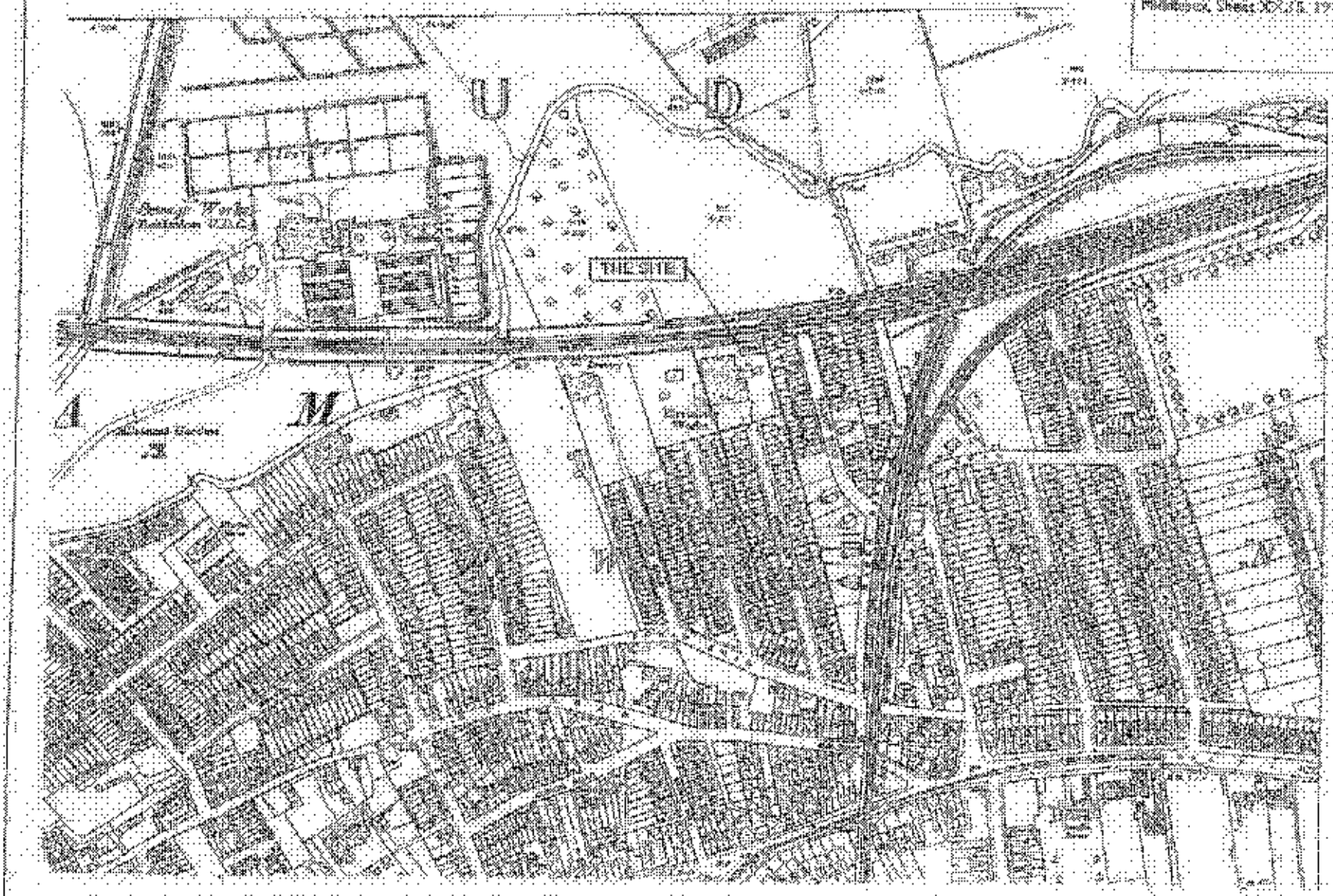
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04066 / SUR 02





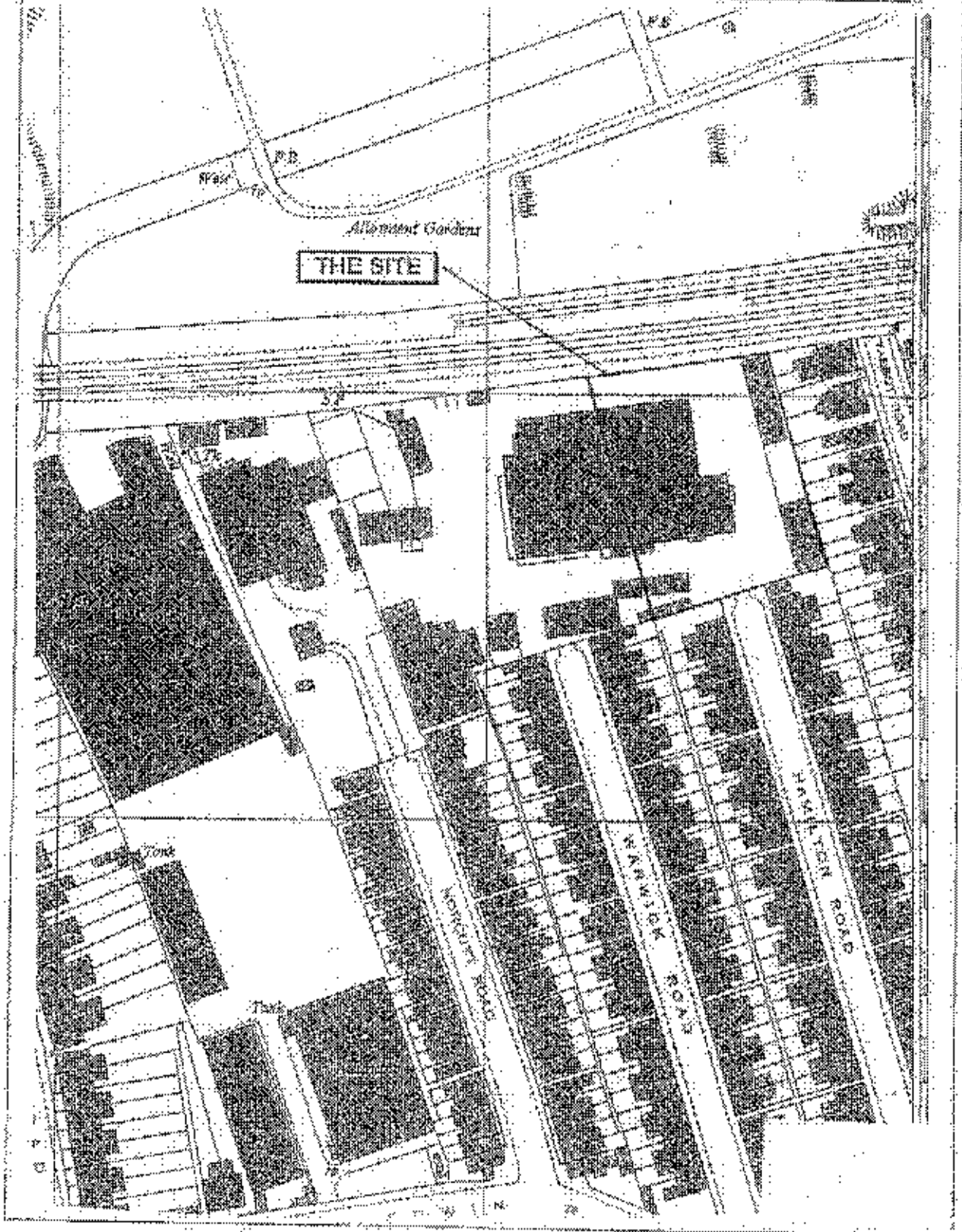
37 Hamilton Road, Twickenham TW2  
Excerpt from the Ordnance Survey of  
Middlesex, Sheet XXV. 1915





37 Hamilton Road, Twickenham TW2

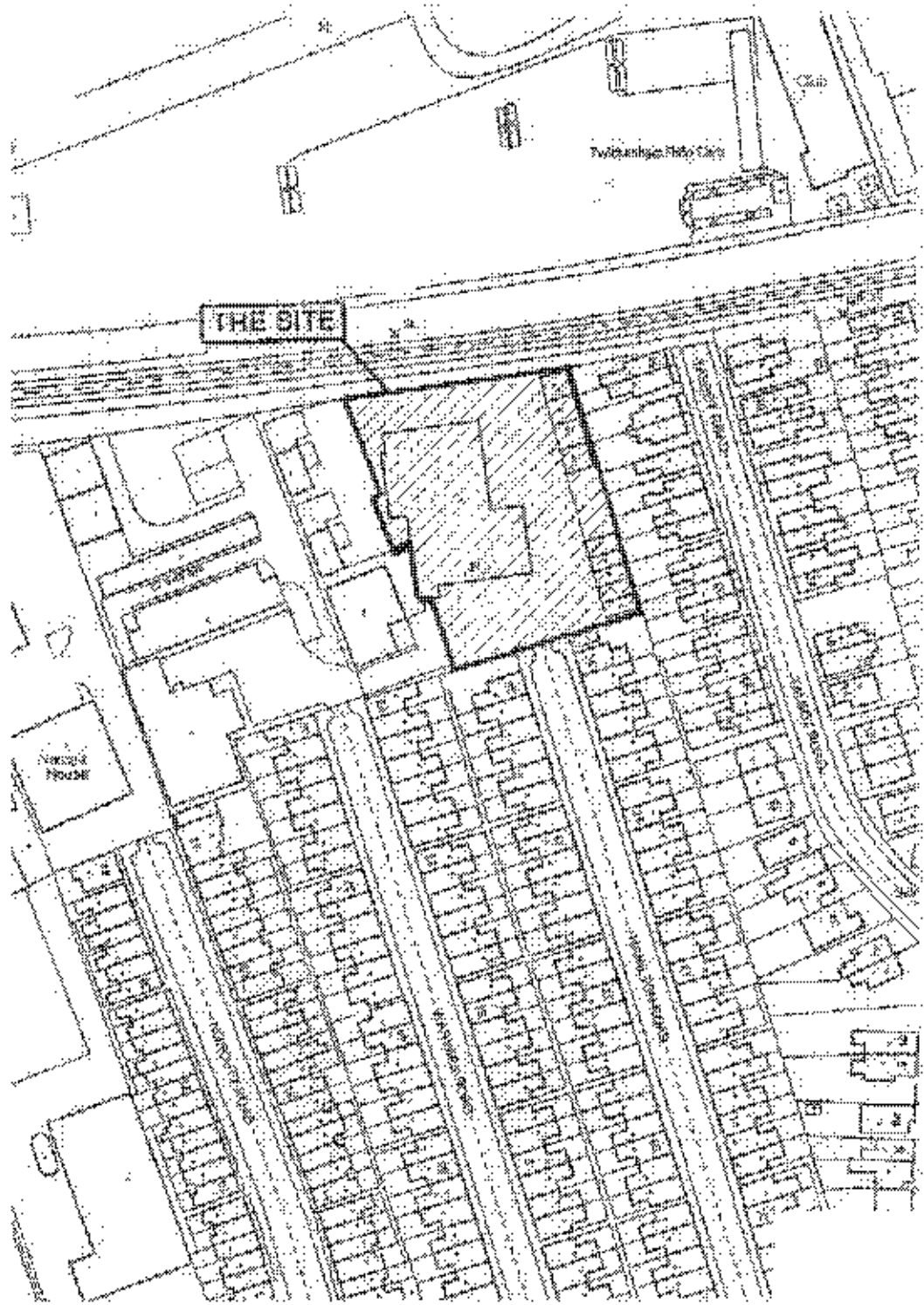
Extract from the Ordnance Survey Map,  
Sheet TQ 1573 SW, 1960





37 Hamilton Road, Twickenham TW2

Site Location Plan and General Layout



**BA**

APPENDIX B

PHOTOGRAPHS





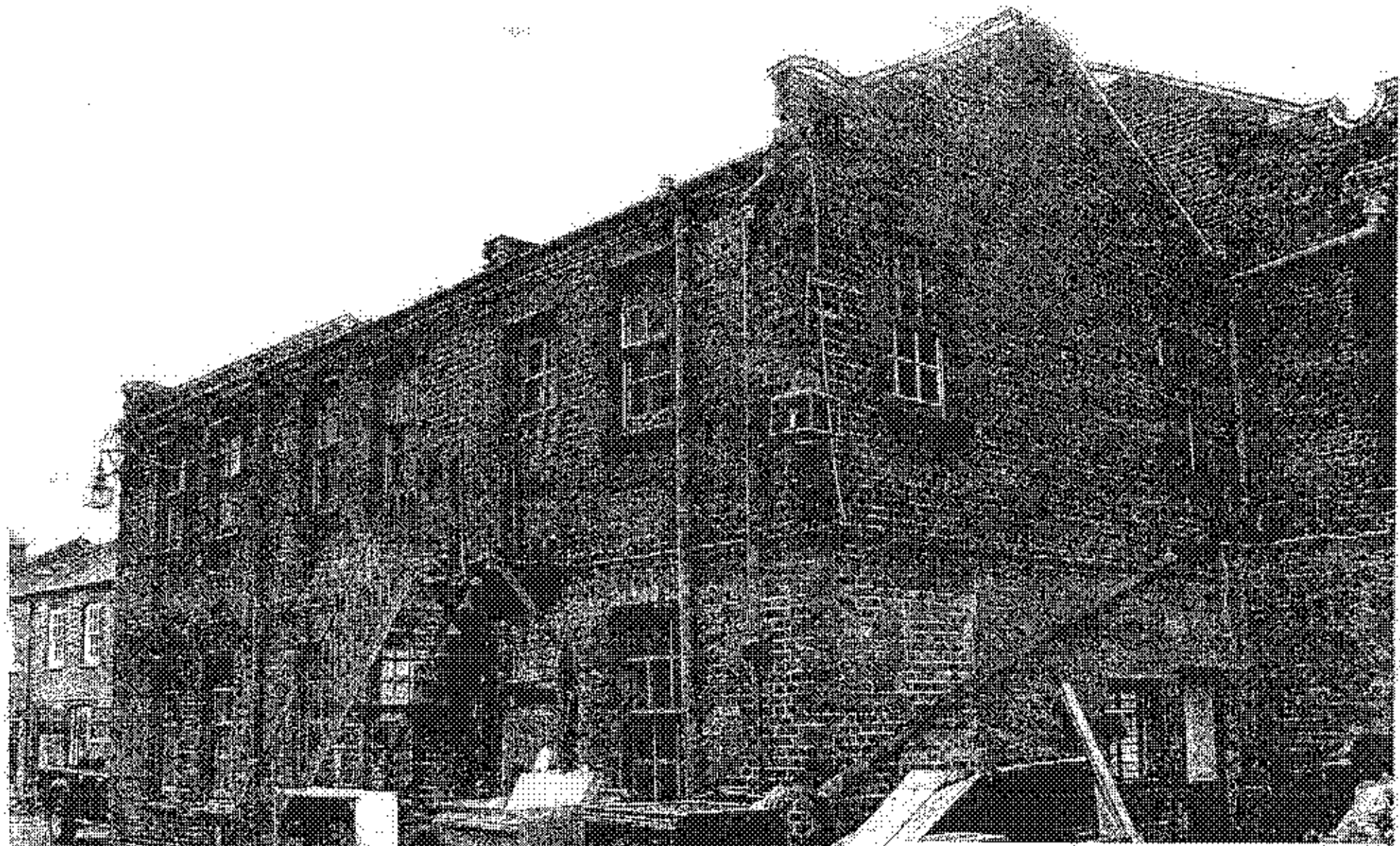
45

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Floor 1.

**BA**

BUILDING by SEE-NEED



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Plot 2



BUILDING 1

REAR VIEW



Barnard & Associates  
The Wetsbach House  
The Business Village  
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London SW18 4JQ  
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Fax: 0204 370 2306

Photo 3

**BA**

Building 1 Roof

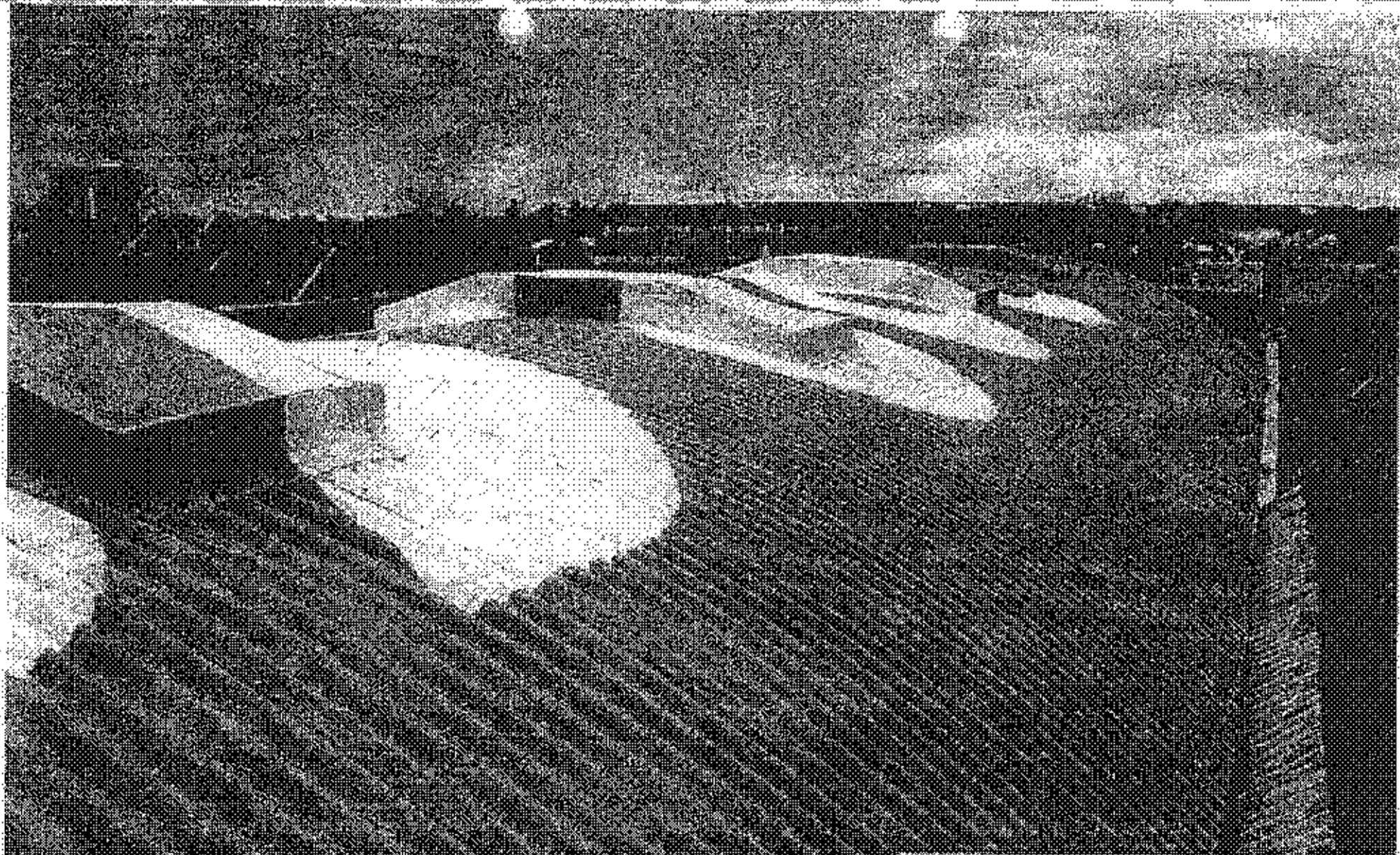


Bernard K. Associates  
 54 Welsbach House  
 The Business Village  
 Scomhill Road  
 London SW1B 4JG  
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 Fax 0208 870 7305

Photo 4

**BK**

Building 2 - Frost

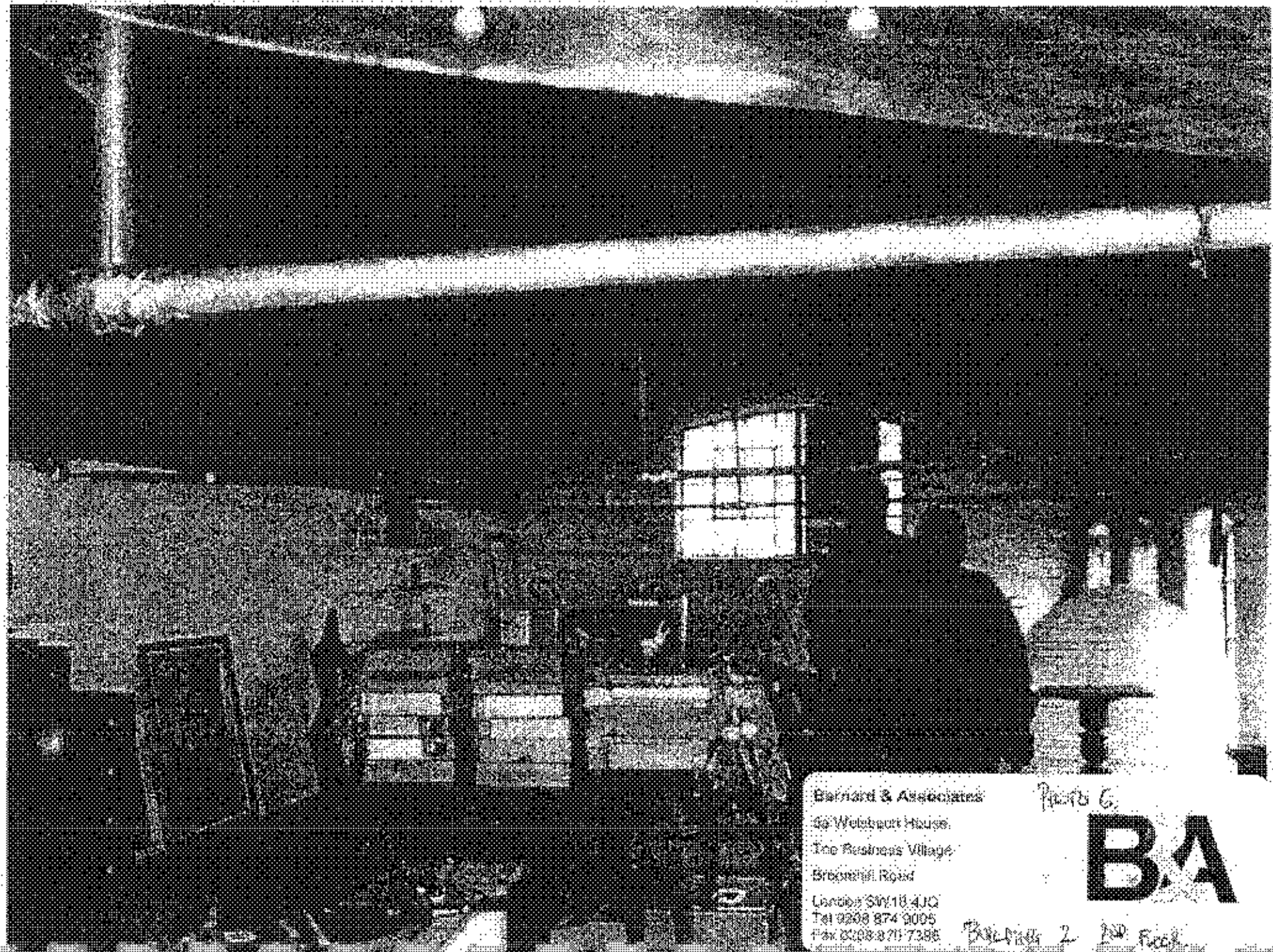


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Photo 5



BUILDING L. Int.



Barford & Associates

46 Westport House

The Business Village

Bromley Road

London SW16 4JQ

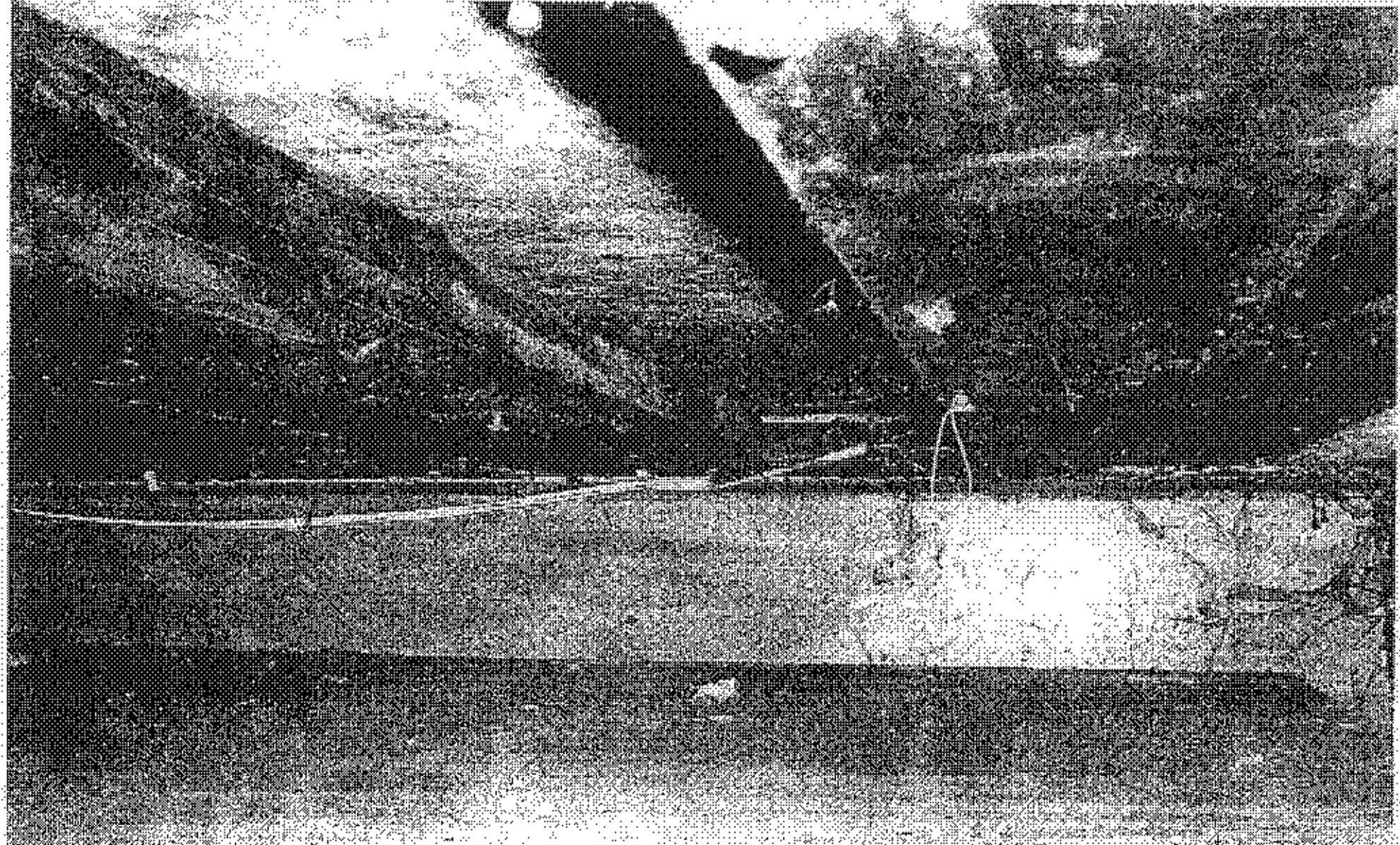
Tel 0208 874 9095

Fax 0208 871 7386

Photo 6

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Ballroom 2 2nd Floor

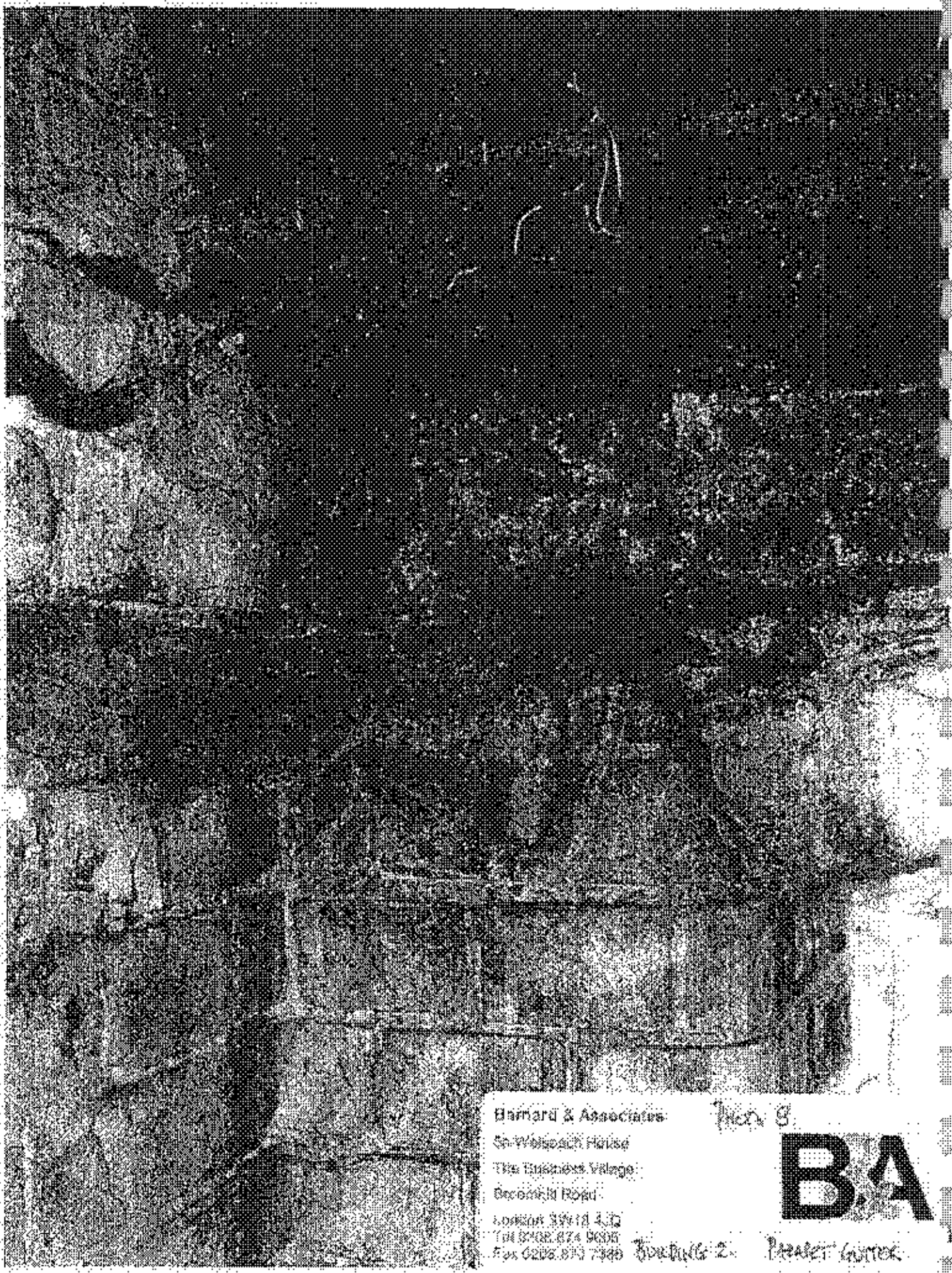


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Photo 7



Building 2 Two Storey



Harvard & Associates

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The Business Village

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Plan 8

**BA**

Building 2

Reader Service  
Internally



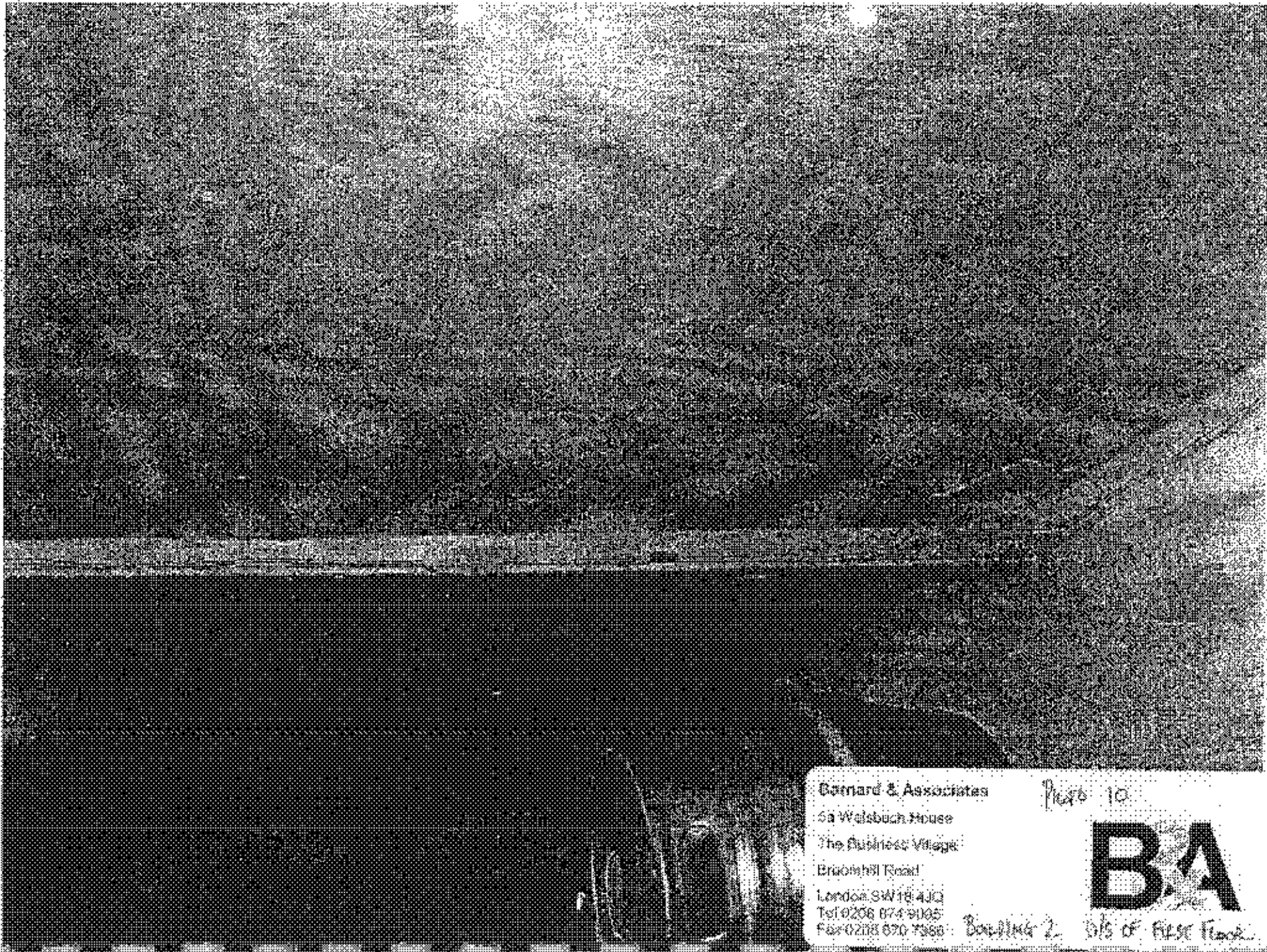
Barnard & Associates  
5th Westbeth House  
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Photo 2



Building 2 INSIDE WORKS

in walls, EXFOLIATION OF BRICKS



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*Page 10*

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*Boiling 2. 0/5 of first floor.*

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Photo 11.



Building 2

Cracks to U/S

FIRST Floor

