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Historic Building Recording


Site & Landscape Survey


Geophysical Survey



**66 Buccleuch Street,
Edinburgh Odeon Cinema Fly Tower,
Historic Building Survey**

Report No 3225

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CONTENTS

1.	Introduction	3
2.	Methods	3
3.	Building Recording Results	4
4.	Conclusion	5
5.	Recommendations	5
6.	References	5

Appendices

1.	Photograph Register	6
2.	Discovery and Excavation in Scotland entry	8

Figures (Bound at Rear)

1. Location map
2. Architects section drawing of part of the roof with annotations

Plates (Bound at Rear)

- 1 One of two main supporting Pratt trusses showing its rivet and lattice construction
- 2 One of two lateral Pratt trusses carried on the main Pratt supporting beams
- 3 Cross-brace steelwork with setting out numbers that mansard jack beams
- 4 The transverse jack truss showing part of the attic floor
- 5 The mansard jack-trusses supporting the timber purlins, the attic floor can also be seen
- 6 Three pulley wheels that lifted the 1930s auditorium curtain
- 7 An external stairs and window
- 8 An external blocked entrance at the top of the demolished 1930 staircase
- 9 External mains riser and sprinkler shut-off valve
- 10 Detailed shot of one of the pressure gauges made by Mather and Platt, Manchester

1. INTRODUCTION

1.1 General

This report presents the results of a series of targeted site visits to record the roof of the fly tower prior to its demolition at 66 Buccleuch Street, Edinburgh on behalf of Cruden Homes (East) Ltd. Other features brought to light during the demolition work were also recorded. The work followed on from a programme of building recording work carried out between March and May 2014; this report should be read in conjunction with the description of the results of that work presented in CFA Report No 3140 (Cressey and Mitchell 2013).

1.2 Background

A re-development scheme for 18 student flats required the demolition of a fly tower and a single storey queue shelter and associated structures to the rear of the auditorium (Fig 1) of the former A Listed Odeon cinema (formerly the 1930s New Victoria Cinema) on Clerk Street, Edinburgh.

The brick-built fly tower was originally built to carry pulley systems that allowed the main auditorium curtains to rise and fall. The ground floor of the fly tower also housed a large number of dressing rooms but these were removed when Cinema 4 was installed (Simpson and Brown 2007). During the initial standing building survey (Cressey and Mitchell 2013) the interior of the fly tower was masked by an internal steel stair case and other structural infilling caused by the creation of Cinema's 4 and 5. All the 1930s structural roof elements were hidden by these modern features. A large load-bearing Bessumer beam spanning the main stage of the auditorium was recorded.

1.3 Objectives

The objectives of the archaeological recording works was:

1. To carry out Level 2 building recording surveys of the former fly tower roof prior to its removal.
2. To identify any other areas considered worthy of further recording within the fly tower during its on-going demolition.

2. METHODS

Digital photographs were taken of the main components associated with the 1930s roof construction. Standard CFA building recording forms were completed where appropriate. A full list of the photographs taken is provided in Appendix 1. A set of thumbnail sketches are provided at the rear of the report. Sketches were made of the main roof components and these helped inform the structural configuration and annotations shown on Fig 2.

CFA followed the recording standards set out by English Heritage (2000 and 2006).

3. BUILDING RECORDING RESULTS

3.1 Fly Tower Roof

The fly tower roof had seven main structural components, as described in Table 1 and labelled on Fig 2.

Component No.	Description
1	Two main supporting Pratt trusses formed by two beams held together with riveted plates. A central post-arrangement is flanked by angled supports typical of Pratt trusses.
2	Two transverse Pratt trusses. Each comprises two I-beams held together with riveted plates forming a lattice construction.
3	Jack-trusses extending off the ends of the main transverse Pratt trusses.
4	I-beam brace supporting the Jack trusses
5	Timber purlins supported on angle cleats bolted on to the Jack-trusses
6	Timber sarking boards of the Mansard roof (removed)
7	Attic timber floor partially removed

Table 1 Principal structural components of the Fly Tower roof.

All the steelwork is presumed to be New British Standard Beams (NBSB) of the 1921 standards for this type of building (Gilbert 1930). The steelwork was designed so that the whole weight of the roof covering was carried on two main load-bearing supporting Pratt trusses situated on each side of the fly tower (Plate 1). These lateral beams (Plate 2) supported the timber attic floor. The attic housed an arrangement of sprinkler pipes and a water tank. The roof was designed with cross-braced jack-trusses (Plate 3-4) at the margins to form the low pitched Mansard slopes of the main roof. Two of the jack-trusses had numbers painted on them, which probably related to setting out when the roof was first fabricated (Peter Elliot, Heritage Engineer pers. comm.). The Mansard steelwork in turn supported the timber purlins onto which the roof sarking boards were nailed (Plate 5)

On the interior west-facing elevation three pulley wheels were present (Plate 6). These were installed to raise and lower the 1930s auditorium curtain.

3.2 Miscellaneous features

An exterior brick built shed and staircase were removed as part of the demolition programme, revealing features relating to the original 1930s design of the fly tower.

Stairs and window

Towards the south end of the fly towers' external west-facing elevation was a flat-roofed brick-built shed that could not be accessed during the primary building survey. When removed this revealed a concrete stair leading to a boarded-up doorway. Two four-paned cast-iron windows had been built into the wall facing onto the stairs (Plate 7).

Original Blocked door into the fly tower first floor

During the initial standing building survey a blocked-off concrete staircase was recorded at the north end of the west-facing elevation of the fly tower. Modern brickwork masked an original doorway into which the staircase led (Plate 8). This entrance was one of several entrances and possibly served as the main fire exit from the fly tower.

Sprinkler mains and riser

Towards the north end of the fly tower's external west-facing elevation was a concrete staircase with handrail. Demolition of the staircase revealed a mains water riser pipe valve wheel and three pressure gauges (Plates 9 and 10). The valve wheel allowed the theatre's sprinkler system to be regulated from the cities mains water supply. The apparatus was designed by Mather and Platt Engineers, Manchester.

4. CONCLUSION

Access to the roof during demolition of the fly tower allowed the roof structure to be fully recorded. The use of two main supporting Pratt beams that each carried two load-bearing transverse Pratt trusses was revealed. Fixed to these beams were jack-trusses forming the Mansard beams that carried the timber purlins on each side of the roof. The composite nature of the steel-work is typical of 1930s buildings, where these types of trusses were used to cover wide spans; a technique commonly used in other structures such as bridges, hangers and factory sheds.

The survey also recorded several other architectural features that were hidden during the primary building survey. These included a concrete staircase and window; an original first floor entrance door into the fly tower; and a sprinkler riser pipe with valve wheel and pressure gauges.

5. RECOMMENDATIONS

The building recording associated with this development has been completed and no further architectural recording work is required. Recording of ground-breaking works associated with the development has yet to be undertaken.

An entry in *Discovery and Excavation in Scotland* (Appendix 2) will be sufficient to disseminate the results of the building survey. The project will also be reported through the *OASIS Scotland* portal.

6. REFERENCES

Cressey, M and Mitchell, S 2013. *66 Buccleuch Street, Odeon Cinema, Edinburgh, Historic Building Survey Report No 3140.*

English Heritage 2000 *Standard Specification for an Architectural Survey.* London

English Heritage 2006 *Recording Historic Buildings. A Descriptive Specification*, 3rd edition. London.

Gilbert, W. R. (ed) 1930 *Modern Steelwork: A review of current practice in the employment of structural steelwork in buildings and bridges*. The British Steelwork Association, London.

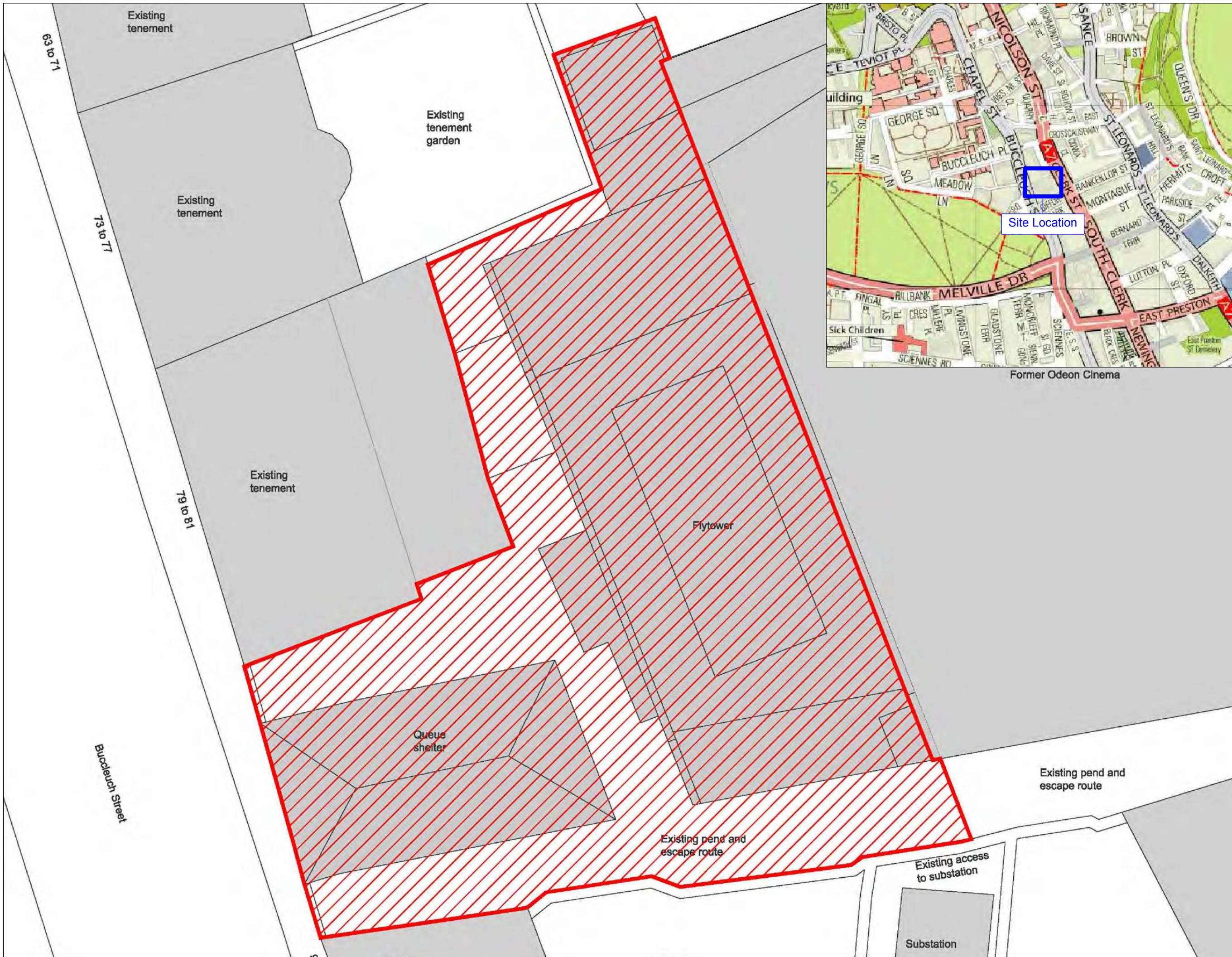
Simpson and Brown 2007 *Odeon Cinema Conservation Management Plan*
Unpublished.

APPENDIX 1: PHOTOGRAPHIC REGISTER

Shot No	Summary description	Facing
1	Steel Pratt truss seen from within the fly tower	North
2-4	Steel Pratt truss seen from within the fly tower	North
5	Lateral Pratt truss beam carrying wooden attic floor beams	East
6-8	Lateral Pratt trusses carrying wooden attic floor beams	North
9	Pulley wheels for hoisting the main auditorium curtain	East
10-11	Detailed shot of the principal Pratt truss with the Pratt truss above it	West
12	Detail shot of the mansard jack-trusses fixed to main support beam	North-east
13	Detail shot of the jack-trusses fixed to main Pratt truss	East
14	General interior of the fly tower	South
15	Fly tower wall and supporting steelwork	South-east
16	Fly tower wall head with three pulley wheels	East
17	Roof beam and mansard members, south end	East
18-19	Test pit dug into the floor of the fly tower	North
20	Stanchion beam supporting a bressumer beam	East
21	Modern brickwork forming a new party wall	East
22-23	Stanchion beam supporting a bressumer beam	East
24	Timber purlins on Mansard roof section	West
25-26	Timber purlins on Mansard roof section	East
27-29	Timber purlins held within steel angle cleats	South
30	Bracing jack-truss with numbering supporting the main trusses	South
31	Mansard purling timers with sarking removed	South-west
32	Transverse jack-truss girder with riveted struts	South-west
33-34	Jack-truss forming the Mansard low-angled roof	South
35	Mansard area of the roof showing the arrangement of girders	South-west
36	Riveted plates connecting the pairs of girders	South-east
35-37	Mansard area of the roof showing jack-trusses and purlins	South-west
38-39	Interior west-facing elevation showing 1930s stanchion	East
40-41	Interior west-facing elevation showing 1930s stanchion at ground level	East
42-44	Interior west-facing elevation showing 1930s stanchion at ground level, north end	East
45	Interior of the fly tower looking up at modern 1980s steel staircase superstructure	Near vertical
46-47	Interior west-facing elevation showing 1930s stanchion at ground level, north end	East
48	Looking up at the attic floor within the fly tower	Spoilt shot
49-50	Exterior window near south stairs following the removal of the brick-built shed	East
51-52	Mains riser with shut off valve	East
53	Mains riser pressure gauge in lbs per square inch by Mather and Platt Engineers, Manchester	East
54-57	Blocked opening for original 1930s door to the first floor of the fly tower	East

APPENDIX 2: DISCOVERY & EXCAVATION IN SCOTLAND ENTRY

LOCAL AUTHORITY:	City of Edinburgh Council
PROJECT TITLE/SITE NAME:	66 Buccleuch Street, Edinburgh: Odeon Cinema Fly Tower Historic Building Survey.
PROJECT CODE:	BUCC
PARISH:	Edinburgh
NAME OF CONTRIBUTOR:	M Cressey
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Historic Buildings Survey
NMRS NO(S):	NT27SE 1636 (Odeon Cinema)
SITE/MONUMENT TYPE(S):	Queue Shelter and Cinema/theatre fly tower
SIGNIFICANT FINDS:	N/a
NGR	NT 2612 7279
START DATE (this season)	May 2014
END DATE (this season)	October 2014
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>The derelict queue shelter and Odeon Cinema were recorded. The cinema was built in 1930 and originally named as the New Victoria Theatre, later being renamed the Odeon. In the 1980s the cinema was converted into a multiplex cinema and the original theatre fly tower was converted into Cinemas 4-5.</p> <p>The queue shelter was a steel-framed shed clad with corrugated iron. Following the partial stripping out of Cinema 4-5 part of the steel-framed stanchions of the original auditorium were recorded.</p> <p>Follow-up recording during the final stripping out of the 1980s steelwork allowed access to the roof space where the 1930s composite roof was exposed. This was found to comprise two main supporting Pratt trusses built into the fly tower walls. The trusses carried two longer load-bearing Pratt trusses that supported the attic floor of the mansard roof. The sloping angle of the mansard jack-trusses were fixed to the end of the main attic floor beams to form the low angled profile of the roof. The purlins were timber and supported on the jack-trusses beams by a series of angled cleats. Other external features recorded included a stairs and window, a blocked doorway both original entrances into the fly tower and a sprinkler riser pipe with shut-off valve and gauges made by Mather and Platt, Engineers, Manchester.</p>
PROPOSED FUTURE WORK:	Archaeological Evaluation
SPONSOR OR FUNDING BODY:	Cruden Homes (East) Ltd
ADDRESS OF MAIN CONTRIBUTOR:	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ.
EMAIL ADDRESS:	mressey@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS, Reports lodged with SMR and NMRS.



Site Location

Former Odeon Cinema



Key:



Survey area

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Fig. No:	1	Revision:	A
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Title:
 Location map and site plan

Project:
 66 Buccleuch Street
 Odeon Cinema Fly Tower
 Historic Building Survey








Client:
 Cruden Homes (East) Ltd

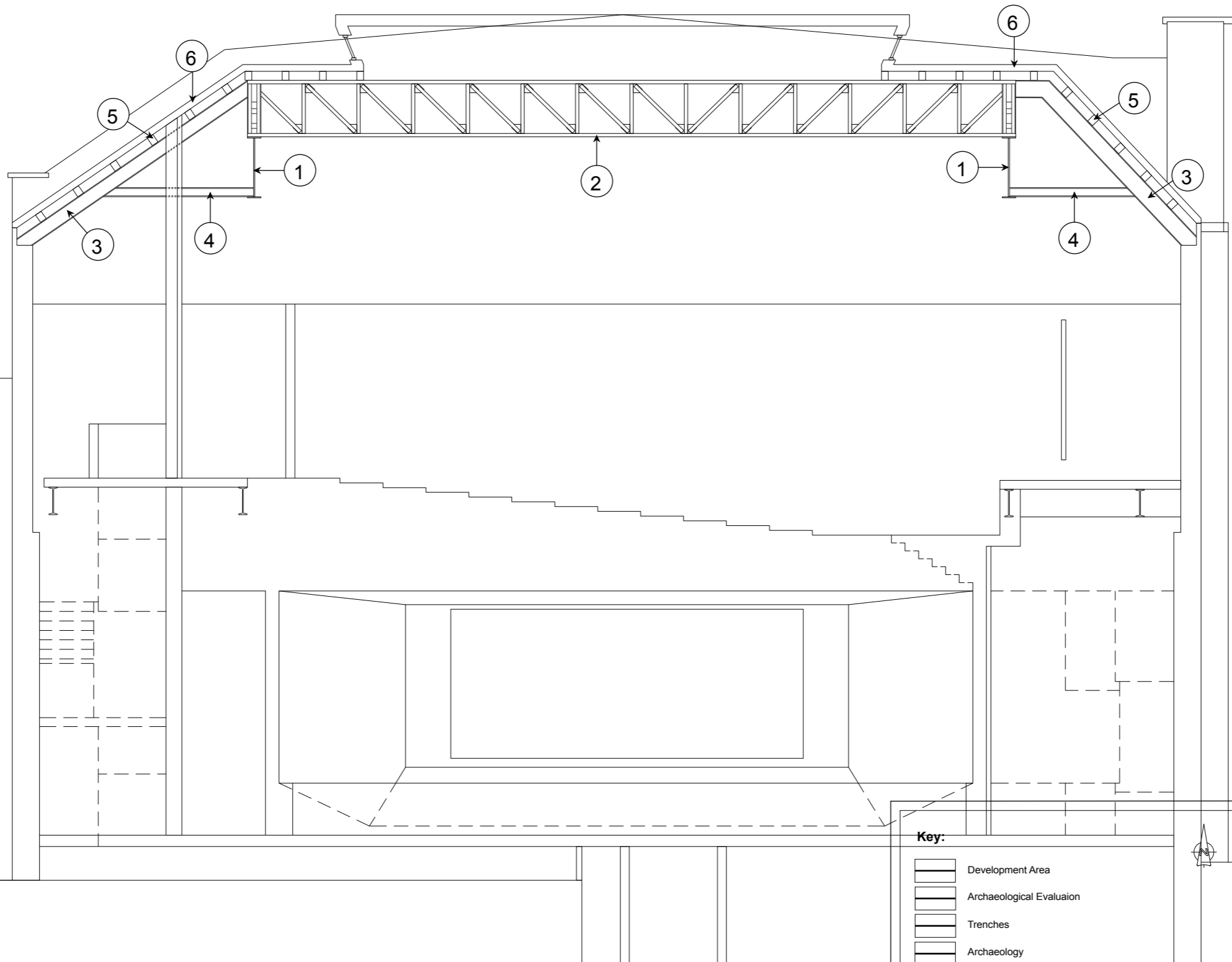
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Drawn by:	Checked:	Report No:
TB	LW	3225






Key:

-  Development Area
-  1 Archaeological Evaluation
-  2 Trenches
-  3 Jack trusses
-  4 Archaeology beam brace
-  5 Timber purlins
-  6 Timber sarking boards



Key:

-  Development Area
-  Archaeological Evaluation
-  Trenches
-  Archaeology

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Fig. No: **2** Report No: **322A**

Title:
Architects drawing of part of the roof with annotations

Project:
**160 Duncleuch Street, Edinburgh
 Odeon Cinema Fly Tower
 Historic Building Survey**

Client:
ABC Homes (East) Ltd

Scale at A3:
1:1000

Drawn by: **EM** Checked by: **MM** Date: **3/0000**

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Plate 1: One of two main supporting Pratt trusses showing its rivet and lattice construction (004)



Plate 2: One of two lateral trusses carried on the main Pratt support beams (005)



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Plate 3: Cross-brace steelwork with setting out numbers and mansard jack beams (030)



Plate 4: The transverse jack-trusses and part of the attic floor (032)



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Project: 66 Buccleuch Street, Odeon Cinema Fly Tower, Historic Building Survey					





Plate 5: The mansard jack-trusses supporting the timber purlins, the attic floor can also be seen (035)



Plate 6: Three pulley wheels that lifted the 1930s auditorium curtain (016)



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Plate 7: The external stairs and window (050)



Plate 8: An external blocked entrance at the top of the demolished 1930 staircase (056)



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Plate 9: External mains riser and sprinkler shut off valve (051)



Plate 10: Detailed shot of one of the pressure gauges made by Mather and Platt, Manchester (053)



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Project: 66 Buccleuch Street, Odeon Cinema Fly Tower, Historic Building Survey										





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