HSDB13

COLD STORE, HIGH STREET, DIGBETH BIRMINGHAM

Geotechnical test pit monitoring

for BAM Construction Ltd

2009/00295/PA

May 2013

HEADLAND ARCHAEOLOGY Ltd

REGISTERED ORGANISATION IfA

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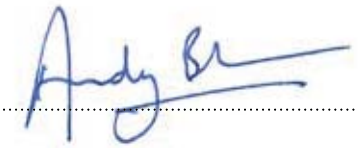

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Site location

COLD STORE, HIGH STREET, DIGBETH BIRMINGHAM

Geotechnical test pit monitoring

As a result of a planning condition placed on planning consent to convert the Cold store building into retail and office spaces, Birmingham City Council requested that a programme of archaeological monitoring was implemented during the excavation of geotechnical test pits within the footprint of the Cold store building.

Although it is located within the historic core of Birmingham a previous open area excavation has identified that, despite the commercial nature of the area and subsequent development, significant amounts of archaeological features remain within the site boundaries. However, during the excavation of the test pits, no observations were made indicating the presence of further historic features in the area.

However, this lack of any archaeological cultural material or features does not mean that the construction of the Cold store has eradicated this type of resource completely. The size of test pits limits the chance of locating and identifying historical evidence, and it is known that features survive at the level of the basement floor from the work undertaken outside the building previously. The test pitting has offered a chance to investigate the construction methods involved in the insulation of the Digbeth Cold store.

1. INTRODUCTION

During the months of February and March 2013, Headland Archaeology (UK) Limited carried out an archaeological monitoring program, comprising two site visits to monitor the excavation of eight geotechnical test pits within the footprint of the Cold Store building, Digbeth. (NGR SP 075865).

The work was commissioned by BAM Construction UK Ltd in respect of a planning application for the conversion of the Cold Store building into an '*Innovation Center*' with B1 office space on the upper floors and either retail, restaurant or a bank on the ground floor. (Planning application reference 2009/00295/PA).

Birmingham City Council had granted planning permission for the development on condition that the applicant secured the implementation of a program of archaeological monitoring of the associated geotechnical ground works, in accordance with a Written Scheme of Investigation approved in writing by the local planning authority, which was duly submitted by Headland Archaeology (UK) Ltd (Boucher 2013).

2. DESCRIPTION OF THE SITE

The site is located within the historic core of Birmingham and previous archaeological investigations have highlighted that the area contains important information relating to the historic development of the city.

It is bounded on the southeast by Allison Street and Well Lane; on the northeast and on the northwest by Park Street; and on the southwest by Digbeth (*Illus 1*). The site contains the Digbeth Cold store building, constructed in red brick with a slate roof, and four storeys in height. The building incorporates a basement/sub level, which is actually at ground level, but only accessible from the first floor within the basement a live open culvert runs north to south, a surviving feature indicating the building's former use.

3. GEOLOGICAL BACKGROUND

The solid geology below the site consists of a Keuper Sandstone ridge that runs below Birmingham from the southwest to the northwest

◂ Illus 2

Extract from the 1888 Ordnance Survey map

5. OBJECTIVES

The objectives of the project were to ascertain whether any archaeological remains were present within the area of the proposed development, characterise them by date, extent, preservation, and significance, produce a report and deposit the archive with a local repository.

6. METHODS

6.1 Monitoring

The ground works comprised the excavation of eight geotechnical test pits of varying dimensions to investigate ground conditions.

Due to the restrictive nature of the area of works, excavation of the geotechnical test pits was undertaken using hand tools. No mechanical excavation was undertaken on the site. The excavated test pits were closely examined for any features and the spoil was re-examined in order to collect any dating evidence.

(Ramsey BGS website), a geological fault in this has resulted in a sharp ridge falling away from the centre of the city (north of the site) towards the River Rae valley floor (south of the site).

4. ARCHAEOLOGICAL BACKGROUND

The Digbeth Ice Factory and Cold store, lies close to the centre of the medieval town of Birmingham, immediately east of the Parish Church of St Martins. Designed in 1899 by Ernest Bewlay for the Linde British Refrigeration Company and completed in 1900. The Building is Grade 2 listed (List entry Number: 1392753).

Within the site itself, cartographic evidence suggests that the original burgage plot boundaries were respected until the 19th century. (see *Illus 2*)

Previous archaeological excavation conducted by Birmingham Archeology in 2007 identified that the southwestern half of the site contains evidence of settlement activity since the Middle Ages suggesting that the area relates to the foundation of the town in 1166 (Duncan 2008, 4).

Excavations that have been undertaken immediately to the north of the building within the site have also identified surviving archaeological deposits of medieval to post-medieval date, including evidence of late medieval tanning.

6.2 Recording

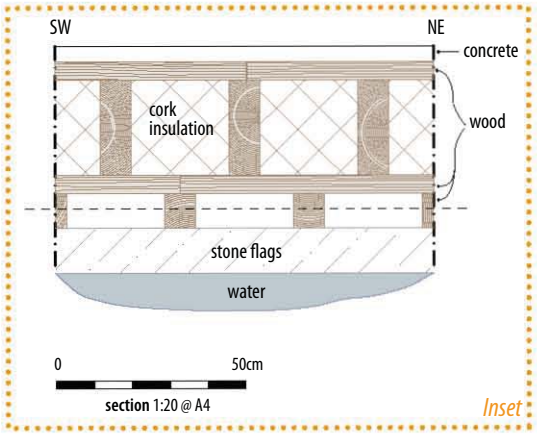
All recording followed IfA Standards and Guidance. All recording was undertaken on *pro forma* record cards.

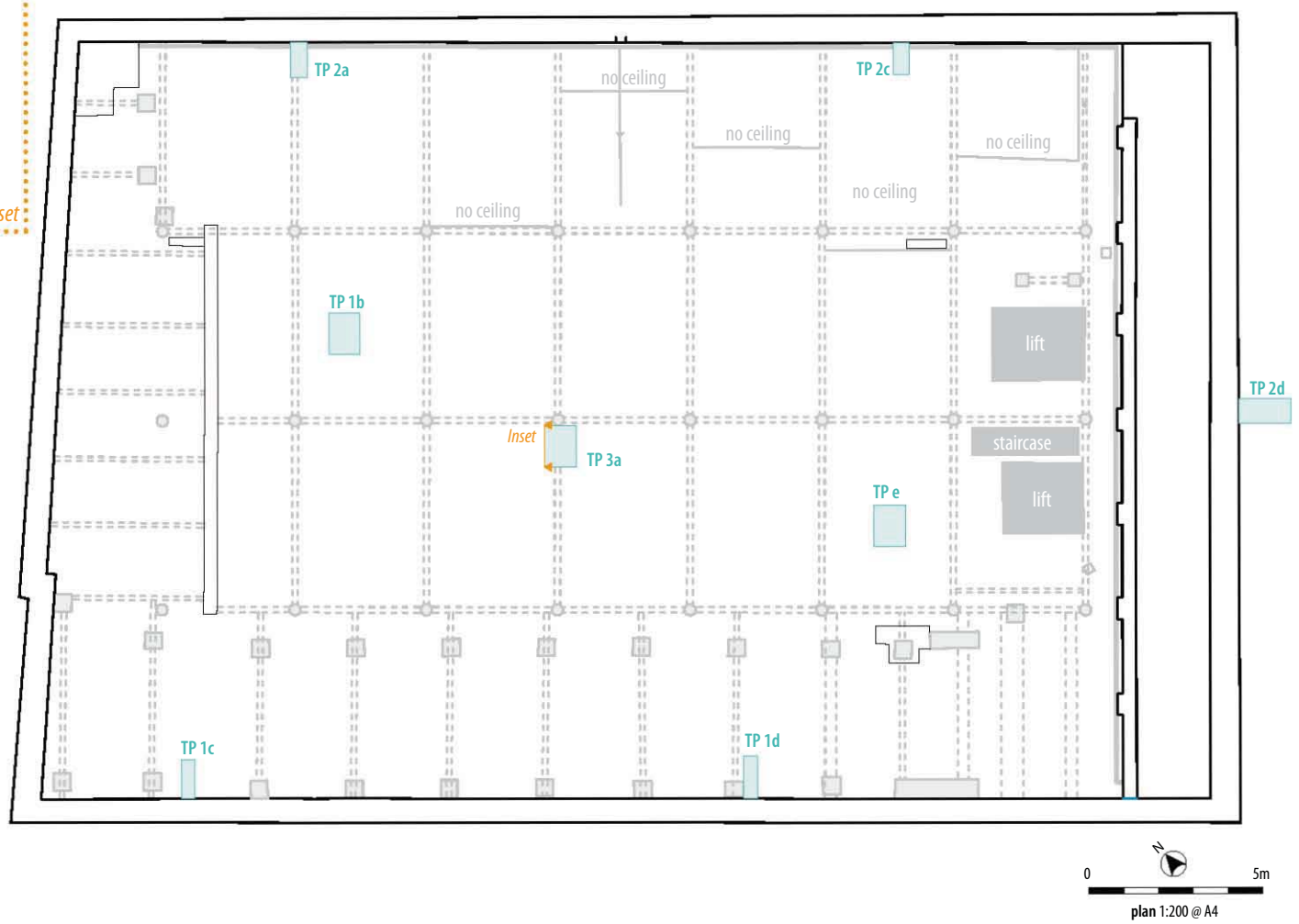
35mm colour transparencies and black-and-white prints were taken; a graduated metric scale was clearly visible in all photographs. Digital photographs were taken for illustrative purposes only and do not form a part of the site archive.

Plans of the areas disturbed during the watching brief were produce on pro-forma record sheets.

7. RESULTS

Detailed records for the test pits are presented below. The excavations only revealed deposits relating to the modern construction of the existing building. Due to the limited extent of such small test pits some caution needs to be applied to the interpretation of the significance and presence of archaeological resources within the footprint of the Cold store building.





Illus 3

Geotechnical test pit locations and section through test pit 3a

7.1 Test pit 1c

Context	Description	Dimensions	Deposit depth
1001c	Concrete Floor	1.13 x 0.39	0.0–0.07m
1002c	Concrete with brick inclusions	(max)	0.07–0.12m
1003c	Brown silt with brick inclusions		0.12–0.27m
1004c	Fill of foundation cut-Brown silt with inclusions of brick and rubble		0.27–0.80m
1005c	Orange-red sand stone-natural bedrock		0.27–0.80m+

7.1.1 Summary of test pit 1c observations

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store

7.2 Test pit 1d

Context	Description	Dimensions	Deposit depth
1001d	Concrete Floor	1.20 x 0.40m	0.0–0.07m
1002d	Concrete with brick inclusions	(max)	0.07–0.22m
1003d	Re-deposited dirty natural sand		0.22–0.77m
1004d	Fill of foundation cut-Black silty clay with inclusions of brick and rubble		0.53–0.83m+
1005d	Orange-red degraded sand stone stone-natural bedrock		

7.2.1 Summary of test pit 1d observations

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store – in this case a foundation trench.

7.3 Test pit 2a

Context	Description	Dimensions	Deposit depth
2001a	Concrete Floor	1.00 x 0.48m	0.0–0.08m
2002a	Deposit of concrete with brick and slag added to the mortar mix.	(max)	0.08–0.28m
2003a	Orange sand with rounded stones inclusions (30mm–50mm) Clean natural- Waterlogged		0.28–0.48m

7.3.1 Summary of test pit 2a observations

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store

7.4 Test pit 2c

Context	Description	Dimensions	Deposit depth
2001c	Concrete Floor	0.91 x 0.45m	0.0–0.04m
2002c	Deposit of concrete with brick and slag added to the mortar mix.	(max)	0.04–0.24m
2003c	Mixed soil deposit with soot, brick inclusions-possibly trampled or disturbed natural		0.24–0.38m
2004c	Orange sand-clean natural deposits		0.38–0.47m

7.4.1 Summary of test pit 2c observations

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store.

7.5 Test pit 2d

Context	Description	Dimensions	Deposit depth
2001d	Brick Surface	1.50 x 0.73m	0.0–0.10m
2002d	Steel reinforced concrete	(max)	0.10–0.35m
2003d	Red brick wall with a yellow- cream mortar		0.35–1.17m
2004d	Brick rubble fill adjacent to 2003d		0.37–1.17m
2005d	Clay with brick and stone inclusions-footing for iron pillar		0.56–1.17m

7.5.1 Summary of test pit 2d observations

The test pit was hand excavated to identify the make up of the area. Within the excavation, a footing for one of the existing iron support pillars was partially excavated. 2003d consisted of a red brick wall, within the limits of the test pit it was unclear as to whether 2004d related to the construction of the cold store, however, its condition and position could indicate that it predated the Cold store building or related to an demolished building associated with the former Ice factory.

7.6 Test pit E

Context	Description	Dimensions	Deposit depth
E001	Concrete Floor	0.90 x 1.20m	0.00–0.04m
E002	Wooden planked floor boards	(max)	0.04–0.12m
E003	2"by 8" 1ft centred joist		0.012–0.37m
E004	Cork packing providing insulation		Infill of joists
E005	Wooden planked floor boards		0.37–0.45m
E006	Small squarer cut joists 2"by 2"		0.45–0.54m
E007	Stone Flags		0.54–0.64m
E008	Rubble and brick spread		0.64–0.70m
E009	Orange-red degraded sandstone-natural bedrock		0.70m+

7.6.1 *Summary of test pit E observations*

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store.

7.7 Test pit 1b

Context	Description	Dimensions	Deposit depth
1001b	Concrete Floor	0.90 x 1.20m	0.00–0.04m
1002b	Wooden planked floor boards	(max)	0.04–0.12m
1003b	2"by 8" 1ft cantered joist		0.012–0.37m
1004b	Cork packing providing insulation		Infill of joists
1005b	Wooden planked floor boards		0.37–0.45m
1006b	Small squarer cut joists 2"by 2"		0.45–0.54m
1007b	Stone Flags		0.54–0.64m
1008b	Rubble and brick spread		0.64–0.70m
1009b	Orange-red degraded sand stone stone-natural bedrock		0.70m+

7.7.1 *Summary of test pit 1b observations*

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store floor.

7.8 Test pit 3a

Context	Description	Dimensions	Deposit depth
3001a	Concrete Floor	0.90 x 1.20m	0.00–0.04m
3002a	Wooden planked floor boards	(max)	0.04–0.12m
3003a	2"by 8" 1ft cantered joist		0.012–0.37m
3004a	Cork packing providing insulation		Infill of joists
3005a	Wooden planked floor boards		0.37–0.45m
3006a	Small squarer cut joists 2"by 2"		0.45–0.54m
3007a	Stone Flags		0.54–0.64m
3008a	Rubble and brick spread		0.64–0.70m
3009a	Orange-red degraded sandstone -natural bedrock		0.70m–0.90m+

7.8.1 *Summary of test pit 3a observations*

The test pit was hand excavated to identify the make up of the area, no archaeology was encountered, nor were any finds or features observed that did not relate to the modern construction of the existing Cold store floor.

8. DISCUSSION

The monitoring of the geotechnical test pits has produced limited results in furthering the understanding of the archaeological resources within the footprint of the Cold store building.

The monitoring only observed archaeological features relating to the method of construction of the existing building (see *Illus 3*); within test pits 3a, 1, and e, the sequence of construction used to provide insulation to the Cold store was exposed.

The concrete skimmed floor within, the centre of the lower level, is set on a wooden planked floor supported by lateral timber joists (2" by 8"). The cavities between the joists are packed with natural cork (a felt-like material).

The upper floor is then supported on a second planked floor, which is then in turn supported on small square cut joists, with the same alignment as the upper joists although with different spacing, no packing material is present in the voids between the lower joists.

The whole arrangement is then set upon stone flags that are laid straight upon the ground. It may be part of the insulation process or a change in the local water levels but the lower levels of the floor are also waterlogged (see *Illus 4*).

Illus 4
Test pit 3a

The method of floor construction changes towards the sides of the building, the elaborate wooden arrangement giving way to a traditional concrete and rubble floor as seen in test pits 1c, 1d, 2a and 2c (see *Illus 5*).

Illus 5
Test pit 2c

The change in the floor designs possible relates to the building's former use. The floors levels round the sides of the building being slightly higher and sloping towards the centre, thus providing natural drainage towards the centre and consequently towards the south of the building as the central area also has a slight gradient, a necessary design feature for a cold store and Ice factory, in use before modern refrigeration methods.

Identified within test pit 2a a small length of degraded red brick wall could indicate that building remains, predating the construction of the Cold store in 1900, survive. However, the significance and relevance of this wall could not be clearly understood within the confines of the geotechnical test pit and it may actually relate to the Cold store foundations or a building now demolished but associated with the former Ice factory complex (see *Illus 6*).

Illus 6

Test pit 2d

The internal floor levels in the lower level of the Cold store range between 105.55m and 105.30m, Examination of the Digbeth Cold store archaeological evaluation report (Birmingham Archaeology 2007) only shows one recorded level in a small trench excavated south of the Cold store, a value of 105.82m with large features shown to survive to a depth of 1.5m below this level. Therefore archaeological features could be expected to be present at basement floor level.

9. CONCLUSION

The results from the monitoring of the geotechnical tests pits have not identified any archaeological deposit relating to the archaeological deposits seen in previous excavations on the site. Some caution needs to be taken when using results from such a limited exercise in establishing the presence or absence of archaeology on the site.

The lack of any archaeological cultural material or features relating to the historic development of the area should not be used to suggest that the construction of the Cold store has eradicated this type of resource completely, as the previous excavations within open areas of the site have shown that a wealth of significant information has survived at levels commensurate with the basement floor.

10. ARCHIVE

Paper records and photographs, to be deposited at Birmingham City Museum and Art Gallery, within one year of the completion of the project.

11. REFERENCES

Duncan, M 2008 ***Digbeth Cold Store, Birmingham An Archaeological Evaluation 2007,*** Birmingham Archaeology Report Project No. 1703.01.

11.1 Online references

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