STONEFIELD SCHOOL, CHURCH LANE, LINCOLN

SCHEME OF ARCHAEOLOGICAL MONITORING AND RECORDING

NGR: SK 97906 72308 Planning Ref.: 2013/1000/F

PCAS job no. 1150 Site code: LSSM13

Archive acc. no.: LCNCC 2013.218

Report prepared for

Franklin Ellis Architects
On behalf of Mr Graham Harvey-Browne

by

B P Hobbs

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Pre-Construct Archaeological Services Ltd 47, Manor Road Saxilby Lincoln LN1 2HX

Tel. (01522) 703800 e-mail info@pre-construct.co.uk

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Summary

Archaeological monitoring and recording took place during the erection of a two-storey extension linking the main building of Stonefield School with a former stable building, and the erection of a single-storey extension to the south elevation of the former stable building.

Stonefield House dates from the mid 19th century and was formally an architect designed dwelling which survives as an expression of the individual wealth generated during and subsequent to Lincoln's industrial expansion during the late 19th and 20th centuries. The status of the houses is reflected in their large scale, expansive plots and often lavishly decorated designs, forming part of an inner city suburban area lying northeast of the Roman and medieval upper city defences.

No features dating earlier than the construction of the main building were observed during the monitoring programme, although construction cuts and foundation walls of former buildings associated with Stonefield House were observed, as well as a well-head and shaft likely to be contemporary with the Victorian building.

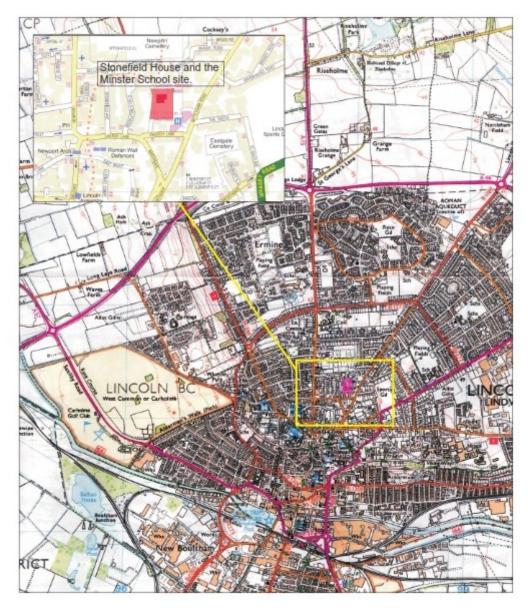


Fig.1. Location of proposed development site, at scale 1:25,000, with inset showing approximate extent of the site and Stonefield House. OS mapping ©Crown copyright. All rights reserved. PCAS Licence No. 100049278.

1.0` Introduction

Pre-Construct Archaeological Services Ltd. was commissioned by Franklin Ellis Architects to carry out a Scheme of Archaeological Monitoring and Recording during groundworks to erect extensions to Stonefield House and to a nearby stable block.

The site lies just over 100m west of Nettleham Road, which follows the line of a former Roman road and aqueduct. Previous archaeological work in the area has identified an extensive Roman burial ground which surrounded this road on its approach to the Roman city. The north wall of the former Roman military fortress was situated c. 190m south of Stonefield House.

2.0 Site location and description (Figs. 1)

The development site is centred on NGR: SK 97906 72308 (Fig. 1). It is located to the north of Church Lane, which links Nettleham Road to the east with Newport to the west - two ancient roads leading north from the historic city. Stonefield House is accessed by a tarmac single track road, extending north from Church Lane. The site is bounded to the west by Middleton's Field; and to the north by Williamson Street and Manor Close.

Stonefield House is an architect-designed former dwelling built in the mid 19th century. The house included a working dairy and kennels; the grounds of the dairy have since been sold privately and the site is now a private dwelling, accessed via the school grounds. The house was converted for use as a school in c. 1980, and continued to be in use as an independent school until 1995, when it was merged with the Cathedral School for Boys and St. Josephs School for Girls to form Lincoln Minster School. In 2011, the addition of St. Mary's Preparatory School to the Lincoln Minster School group lead to the closing of the Stonefield House site, while plans were considered for the refurbishment and reopening of the school.

3.0 Geology and Topography

No drift geology is recorded in this part of Lincoln, where the site occupies solid geology, recorded as Lincolnshire Limestone. This commonly includes sandy limestone and mudstone from the Lincoln area northwards (BGS, 1973 & http://www.bgs.ac.uk/lexicon/). Small areas of exposed ground noted during the 2013 site visit were silty sand.

Stonefield House lies approximately in the centre of the redline site and stands on a platform approximately 1m higher than the playing field/garden to the east, suggesting that it may have been landscaped as part of the original house design or during its later conversion to a school. To the south of the house is another flat area which was formerly used as the school playground. When compared with the adjacent private gardens, this area appears to have been lowered.

4.0 Planning Background

Planning permission for development was granted subject to various conditions by City of Lincoln Council on 4 November 2013. The permission was granted subject to conditions, and Condition 3 required the implementation of an appropriate programme of archaeological work in accordance with a Written Scheme of Investigation (WSI) approved by the City of Lincoln Council. Thereafter, the programme of archaeological work was undertaken in accordance with an approved WSI.

5.0 Archaeological and Historical Background

The Lincoln Archaeological Research Assessment (LARA) has classified the proposed redevelopment site as having a potential research agenda relating to the following eras (http://www.heritageconnectlincoln.com/character-area/northgate-and-church-lane/):

- Prehistoric (Limestone Uplands);
- Roman Military (Legionary 'prata' and 'territorium' / Canabae outside east, north and west gates);
- Roman Colonia (Cemeteries);
- Early medieval (Central elements of former Roman city and Roman network);
- High Medieval (Lincoln common fields);
- Early Modern (The city's arable fields);
- Industrial (Stone pits north and north-east of the upper city).

Of these, the most archaeologically significant in relation to the site are probably the Roman colonial cemeteries, the Roman Legionary *prata* and *territorium*, the Roman *Canabae* outside the north gate; and the Industrial stone pits north of the upper city. In June 2013, Pre-Construct Archaeological Services Ltd., (PCAS), compiled a Heritage Statement for the site which examined its archaeological and historical potential based on current knowledge and previous findings in the area (Lane 2013). The principal archaeological potential of the site as reported by PCAS is outlined below.

The site lies just over 100m from Nettleham Road, which follows the line of a Roman road and aqueduct. The site falls on the periphery of what is believed to have been an extensive Roman burial ground surrounding this road. The site north wall of the former Roman military fortress was situated c. 190m south of Stonefield House.

A 1722 map of Lincoln by William Stukeley shows the Newport suburb to the north of the Newport Gate and extending almost to the development site. Stonefield House was not built at this time; the area of Church Lane appears to be open farmland (Jones *et al*, 2003).

The house lies in an area which became popular with wealthy post-medieval business owners during the industrial revolution. This is reflected in the number of high-status houses in the area dating from the 18th and 19th centuries. A study of historic maps confirmed that the site was previously undeveloped prior to the building of Stonefield House: maps from 1832, 1842, 1856 and 1868 all show no development on the site. The 1842 map is sufficiently detailed to show the field boundaries, which broadly align with the boundaries of the modern plots (Lane 2013;7). Stonefield House, including the Stonefield Dairy, stables, outbuildings, ornamental gardens and tree-lined avenues within the complex is first shown on the 1887 OS map (Mills and Wheeler 2004). An article in the *Lincolnshire Chronicle* from 1900 mentions the grounds of Stonefield House in association with subsidence revealing extensive galleries beneath the south gardens, the results of earlier limestone quarrying in the area.

6.0 Methodology

The footings for the extensions extended the length of the eastern side of Stonefield House and were also excavated to the north-east, linking the main building with the former stable block located to the immediate north. Rectangular areas for pads to help support the new structures were also excavated at intervals within the footings. The excavations were carried out by a JCB machine excavator equipped with a 0.6m wide toothed bucket due to the presence of extensive building rubble in the underlying layers.

All features and layers observed were recorded on standard PCAS context recording sheets, and the progress of the groundworks noted on a standard PCAS site diary sheet. Sample sections were drawn at intervals at a scale of 1:20, and plotted on a base plan. A colour slide and digital photographic record was maintained: a selection from this is reproduced as Appendix 1. No finds of archaeological interest were recovered.

The footings trenches were monitored over seven non-consecutive days; archaeological recording was undertaken by B. Wheeliker, R. Savage and A. Lane.

7.0 Results

Two separate areas of monitoring were undertaken during this scheme of works: the footings for the extension on the east side of the existing buildings, and a short stretch of drainage trench in the northeast corner of the plot (Figure 2).

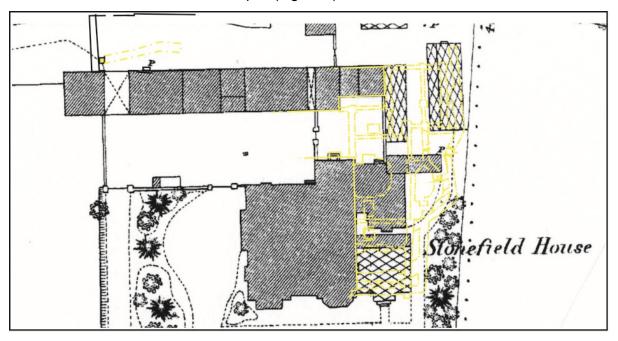


Figure 2: Plan of monitored footings (yellow) overlain on historic mapping of Stonefield House provided by the Lincoln Heritage Database. Not to scale.

The machine excavation of footing trenches for new buildings to the east of Stonefield House exposed several stretches of buried brick wall lines, on average no more than 0.30m down from current ground surface, indicating the extent of previously demolished structures associated with the main building (Figure 3).

In the north-east footings natural limestone brash (004) was located at an average depth of 1.0m beneath orange brown clay silt (008) which was overlaid by dark brown silt (003), likely a buried garden soil. Overlying modern makeup layers in this area consisted of sand and hardcore layer (002), tarmac surfacing (001) and crushed limestone (009). Further to the north of the site, a trench excavated through a paved surface and modern makeup layers located natural layers (046), consisting of a loose light orange coarse sand with stone inclusions at an average depth from surface of 0.60m.

Layer (003) contained the remnants of an east-west aligned brick wall [010] which after further excavation of footings to the east was associated with partially exposed north-south aligned brick walls [012] and [014]; the latter containing two heavy cast iron pipes suggestive of conducting water or perhaps steam from a heating boiler. Similar iron pipes were observed to the south in brick structure (019), likely part of a heating system, which rested on a foundation of re-used limestone blocks (017).

Footing trenches excavated to the east of Stonefield House varied in depth between 0.70m and 1.3m through loose soil and building rubble, instability of the sides causing frequent trench-side collapse. Buried brick walls were revealed in most of the footings, indicating demolished structures associated with the house; several thought to be part of the heating system.

Near the south end of the footings, feature [018] was partially exposed located 1m to the east of the main building. Initially thought to be the remnants of a well, the brick structure exhibited a semi-circular wall edge on the west side, with the remaining three sides being comparatively square and the north edge of brickwork appearing to be slightly stepped. The fill of this feature consisted of redeposited soil, (035), similar to buried garden soil (003), with the construction cut of the feature partially observed at a depth of 1.39m from surface level. However the purpose of this structure was not ascertained from the available evidence.

A well, [039], was located on the far eastern edge of the footings, in a north-south aligned trench approximately 13m to the east of Stonefield House. This was a circular structure built of machine manufactured plain brick with a domed brick built well-head. The main structure beneath the dome had a diameter of around 1.7m and an exposed depth of at least 2.3m.

The brickwork observed consisted of two types, a frogged type set in cement in the centre of the well-head and clearly more recent than those bricks of the main structure of the shaft which were set in lime mortar. The interior of the well shaft was coated with plaster which had been either over-painted or possibly iron-stained, producing a mottled colouring. A lead pipe of 45mm diameter with a perforated base was retrieved from the shaft. The well shaft was considered to be contemporary with the original building, with continued use signified by the later domed well-head. The structure was later broken out and backfilled. The location of a second, capped, well was encountered adjacent to the stable buildings to the north of the site but, being outside of any intended groundworks, it was left undisturbed.

Approximately 1m to the south of the well described above was an arched brick structure, [041], partially exposed in the east facing section of the same footing trench with an observed width of 2.4m and cut into buried garden soil (003). The construction was of plain brick set with lime mortar, chiefly stretcher bond although with what appeared to be a header bond at the south end, possibly representing a right-angled turn or a previously connecting structure. Limited exposure by machining did not reveal a construction cut.

The construction form suggests that this was not a load-bearing structure. However due to the partial exposure in the trench, the purpose of the brick arch was not positively identified and could either be the part of the sub-surface heating system previously examined or possibly, reflecting the presence of the nearby well, the remains of a water conduit.

Other than the remains of fragmented brick wall lines, no further structural features of interest were exposed in the remaining footing trenches to the east of the main building.

To the north of the site between the car park and the old dairy site, a trench was excavated for drainage leading to an existing inspection cover. To the south of this trench the concrete cap of a second well was uncovered, however this was not disturbed and therefore recording of the structure was thought unnecessary.

8.0 Conclusion

Other than the exposure of sub-surface post-medieval/modern brick structures such as the well-head, [039], no features of archaeological interest were encountered during the monitoring of the footing trenches.

The brickwork observed within the footing trenches that cut into garden soil (003) revealed to some extent the presence of original 19th century outbuilding structures lying to the east of

Stonefield House and associated with the main building. The substantial cast iron pipes within brick structure [019] thought to be part of a heating system likely indicates the presence of a boiler house to the north-east of the site, the connecting brickwork possibly being part of this structure.

Reference to an early Ordnance Survey map including Stonefield House shows the original extant buildings associated with the east wing of the house, which can be compared to the location of the current footing trenches. It is likely therefore that the archaeological monitoring process described above has observed the extent of the mid 19th century and later extensions and outbuildings to the immediate east of the house.

9.0 Effectiveness of methodology

The methodology employed allowed a full inspection to be made of the sections of all of the foundation trenches excavated by the contractor, and with minimal disruption to the primary scheme.

10.0 Acknowledgements

PCAS Ltd would like to thank Franklin Ellis Architects on behalf of Mr Graham Harvey-Browne for this commission.

11.0 Site Archive

The project archive is currently held at the offices of PCAS Ltd. in Saxilby, Lincolnshire while being prepared for deposition, and will be deposited with the Lincoln City and County Museum ('The Collection') by January 2015, with the exception of the finds, which are to be discarded.

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Appendix 1: Colour Plates



PL. 1: General view of development area with footings marked out.

Facing south



PL. 2: General view of footing trenches facing north



PL. 3: Brickwork with cast iron pipe, possibly heating system.

Facing south



PL. 4: Brick built feature [18], 1m scale. Facing west



PL. 5: Brick built well [39] with cap removed. Facing South



PL. 6: Edge of brick well [39] showing overhang of well mouth.

Facing east

Appendix 2: Context register

| Context No. | Туре | Description | Finds/dating |
|----------------|-----------|---|---------------|
| 001 | Layer | Modern tarmac | Modern |
| 002 | Layer | Modern hardcore | Modern |
| 003 | Layer | Buried garden soil | Pm/Modern |
| 004 | Layer | Limestone within sandy clay | Natural |
| 005 | Structure | North-south aligned wall | Pm/Modern |
| 006 | Cut | Construction cut for [005] | Pm/Modern |
| 007 | Structure | Concrete base of wall [005] | Pm/Modern |
| 800 | Layer | Buried soil | Post-medieval |
| 009 | Layer | Modern hardcore | Modern |
| 010 | Structure | Partially exposed wall | Pm/Modern |
| 011 | Cut | Construction cut of wall 010 | Pm/Modern |
| 012 | Structure | Partially exposed wall | Pm/Modern |
| 013 | Cut | Construction cut of wall 012 | Pm/Modern |
| 014 | Structure | Partially exposed wall containing iron pipes, possibly heating system | Pm/Modern |
| 015 | Cut | Construction cut of wall 014 | Pm/Modern |
| 016 | Layer | Re-deposited soil (003) within [15] | Pm/Modern |
| 017 | Structure | Limestone foundation material for wall [19] | Pm/Modern |
| 018 | Structure | Partially exposed sub-circular brick structure | Pm/Modern |
| 019 | Structure | Brick wall overlying foundation (17) | Pm/Modern |
| 020 | Fill | Sand silt backfill of footing trench [23] | Pm/Modern |
| 021 | Fill | Redeposited soil (003) and (008) within cut [23] | Pm/Modern |
| 022 | Fill | Fill of construction cut [23] | Pm/Modern |
| 023 | Cut | Construction cut for walls [017] and [019] | Pm/Modern |
| 024 | Layer | Demolition layer similar to (002) | Pm/Modern |

| 025 | Structure | Foundations of former building SE corner of Stonefield House | Pm/Modern |
|-----|-----------|--|-----------|
| 026 | Layer | Buried soil, similar to (003) | Pm/Modern |
| 027 | Layer | Construction sand within construction cuts [029] and [030] | Pm/Modern |
| 028 | Layer | Foundation rubble hardcore for now demolished building | Pm/Modern |
| 029 | Cut | Construction cut of wall [025] | Pm/Modern |
| 030 | Structure | Brick wall foundation of building, likely [025] | Pm/Modern |
| 031 | Fill | Concrete footing | Modern |
| 032 | Layer | Buried soil, likely same as (003) | Pm/Modern |
| 033 | Cut | Construction cut of [030] | Pm/Modern |
| 034 | Fill | Fill of brick feature [018] | Pm/Modern |
| 035 | Fill | Fill of brick feature [018] | Pm/Modern |
| 036 | Layer | Concrete | Modern |
| 037 | Layer | Construction sand, same as (027) | Pm/Modern |
| 038 | Cut | Construction cut of [018] | Pm/Modern |
| 039 | Structure | Well | Pm/Modern |
| 040 | Fill | Infill sealing well [039] | Pm/Modern |
| 041 | Structure | Brick structure south of well [039] | Pm/Modern |
| 042 | Structure | Brick structure of foundation wall SE of new extension | Pm/Modern |
| 043 | Layer | Topsoil of north side of site | Pm/Modern |
| 044 | Layer | Mid brown soil with CBM, limestone/mudstone inclusions | Pm/Modern |
| 045 | Layer | Ballast and terram debris | Modern |
| 046 | Layer | Natural coarse sand | Natural |
| 047 | Layer | Paving stones and cement | Modern |

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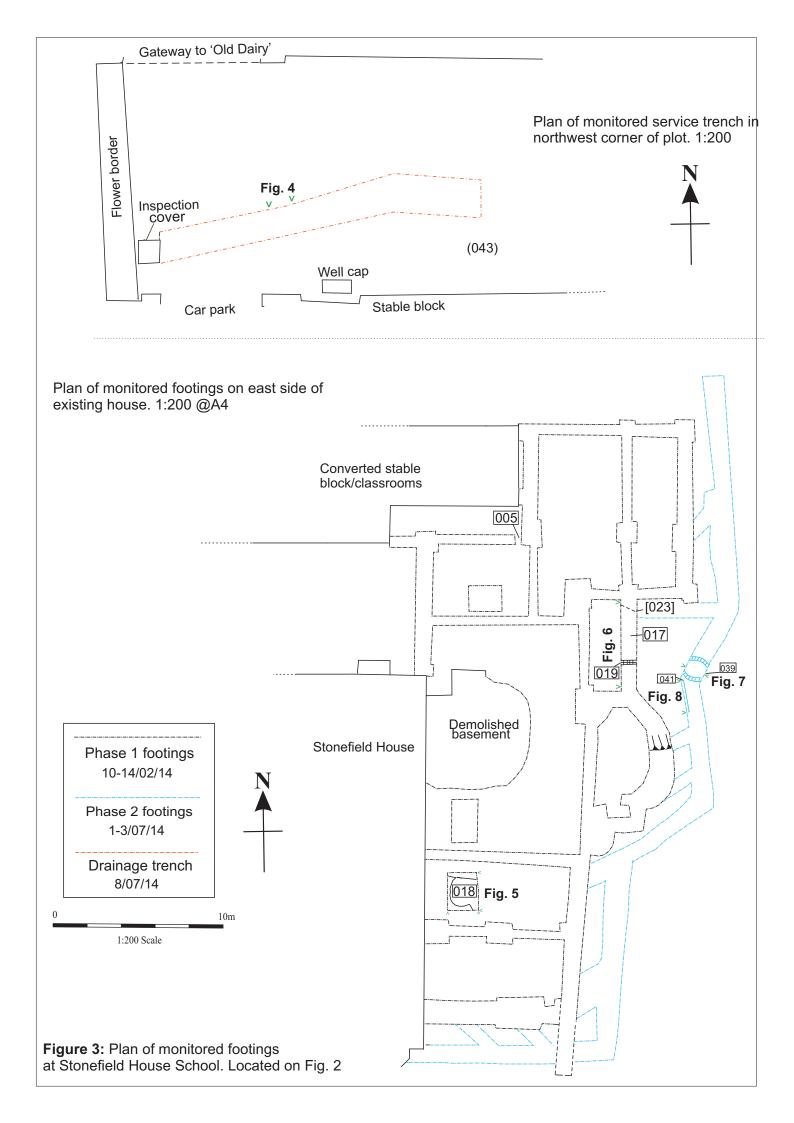
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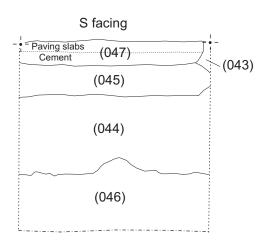


Figure 4: Representative section service trench. 1:20

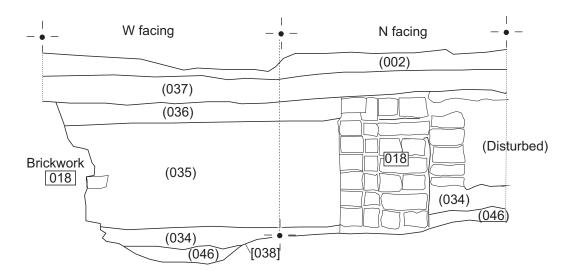


Figure 5: Internal faces of hollow c.circular feature 018. 1:20



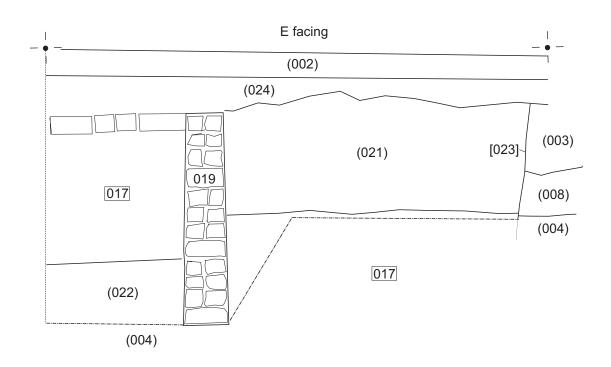


Figure 6: Section of stone footings 017 & brickwork 019. 1:20

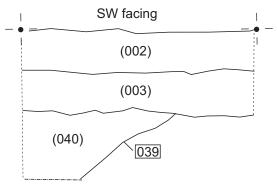


Figure 7: Section of well 039.

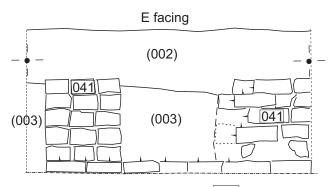


Figure 8: Section of wall 041. 1:20