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An Archaeological Evaluation at

Bilton Grange School Walled Garden

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An archaeological Evaluation at Bilton Grange School Walled Garden

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Summary

Twelve test pits dug within Pugin's walled garden at Bilton Grange recorded truncated radial and concentric paths, confirming the accuracy of the Ordnance Survey map depictions, 150 years of horticultural tilth and the foundations of the perimeter wall on the south-west interior side of the garden. There were no significant finds and no other structural remains were present.

Introduction

Planning approval was granted by Rugby Borough Council on 6th July 2011, for the development of an all-weather sports area within the walled kitchen garden at Bilton Grange School, Rugby (R11/0985 and R11/0989). Condition 4 of the planning consent required that 'No development shall take place until the applicant, or their successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant in writing and approved by the local planning authority'. The reason for the condition: 'To ensure the preservation of important archaeological remains and that any archaeological history of the site is recorded'. (R11/0985).

The garden, centered at NGR: SP 8951 71617 together with an adjoining cottage is Grade II listed, and is reputed to have been designed by the celebrated Gothic revival architect of the High Victorian Movement, Augustus Welby Northmoor Pugin as part of the wider development of Bilton Grange. Were this attribution correct, the garden could be considered unique in Pugin's repertoire (Colson Stone 2006, 65).

The designation status of the walled garden which led to a request for further information by Warwickshire County Council acting as advisors to Rugby Borough Council focussed on the relationship between Pugin and the design of the kitchen garden. A Brief for the work was prepared by Anna Stocks, Planning Archaeologist for Warwickshire County Council, in May 2012 for fieldwork and reporting. In response a Written Scheme of Investigation was submitted on the 30 July 2012, which was approved by Warwickshire County Council before fieldwork began.

Background

The walled garden at Bilton Grange School is reputed to have been designed by A W N Pugin, who in the period 1844-51 was working for the Grange owner, Captain Washington Hibbert in greatly enlarging his home there (Hill 2007, 515). Their collaboration was a fraught one, the sensitive Pugin being at the mercy of the irascible and litigious Hibbert, who was related by marriage to Pugin's principal benefactor, the Earl of Shrewsbury.

There are no contemporary plans of the walled garden (although basic surveys date to soon after its completion) and no specific connection has been made to Pugin's designs for the main residence. Structural similarities between the makeup of the walls of the garden and aspects of the Grange suggest it is likely that the garden walls and structures were part of Pugin's layout and design. There were few opportunities for the architect and designer to lavish his tell-tale designs on what was necessarily a workaday structure. The walls are almost entirely unadorned and only the gate piers and brickwork provide an indication of his involvement.

The history of Bilton Grange has previously been set out in detail and is not revisited here (Edwards 1996; Warwickshire Gardens Trust 1997; Colson Stone 2006). Documentary evidence shows that the gardens had been completed and took the form in which they basically survive today by 1861 (Sale particulars quoted in Colson Stone, 2006, 21).

The general decay of the gardens was noted in 2006 (Colson Stone 2006, 46-7). There has been no appreciable deterioration since that date.

The interior of the garden is almost totally grassed, and is used as an archery ground. It is mown and at the time of evaluation, surviving low earthworks indicate the vestiges of former radial paths quartering the garden.

Methodology

Evaluation comprising comprised twelve archaeological test pits dug at points around the garden interior (Fig 1) targeted on both open areas and path alignments was agreed with Anna Stocks for Warwickshire County Council. A contingency for a further four test pits was available to clarify features exposed but in the event none were required.

The test pits were machine-dug in the pre-agreed locations using a small rubber-tracked mini-digger and, thereafter, hand-cleaned as appropriate.

Each test pit measured some 1.2m x 1.2m in plan and extended down either to the first garden-related structural feature or, if absent, the natural substrate. Here the underlying geology comprised orange sandy clay with pockets of gravel in a sand matrix.

In each test pit the stratigraphic sequence was recorded in written form on pre-printed trial pit record forms. Where archaeology survived this was recorded in drawn form, either scale plan (1:50) or a section (1:20), and a photograph with 1m-scale was taken of each of the pits, using both digital media for reporting purposes and black and white negative for deposition in archive.

The ground level at each test pit was measured above Ordnance Datum, the Ordnance Survey bench mark being transferred from the centre of nearby Dunchurch along Vicarage Lane. A temporary benchmark was set up within the garden (121.525m above OD on the stone threshold at the south-western pedestrian door into the garden).

The test pits were machine-backfilled simply using their original up-cast and lightly tamped down to restore the ground level.

Weather conditions, at the end of the wettest summer on record, began in sunshine on 28th August, but deteriorated with heavy persistent rain. All photographs of open test pits were taken on 28th August when the pits were first opened.

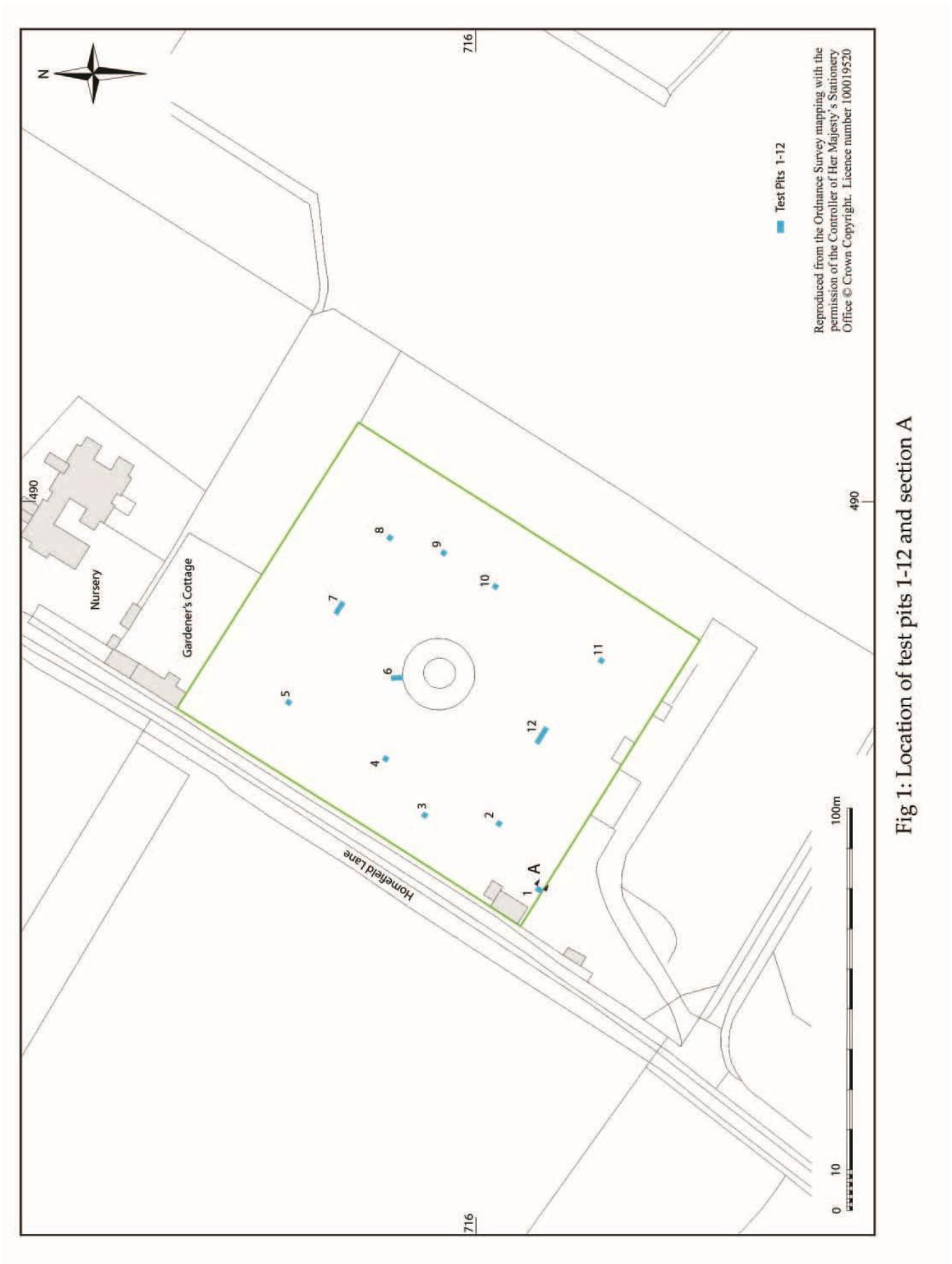


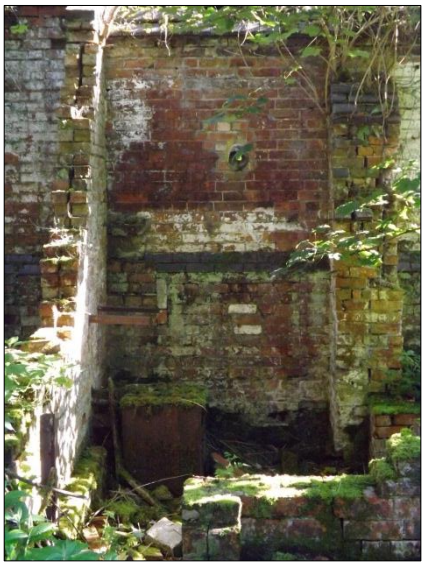
Fig 1: Location of test pits 1-12 and section A

The wall

The detail of the garden perimeter wall was noted since one of the test pits was dug up against it. Records of brick were made in accordance with Harley (1974).

The wall encloses the garden on all four sides, forming a rectangle. It has a plain interior face, while on the exterior north-east, north-west and south-east sides it is heavily buttressed. A large double gateway stands at the midpoint of each side, but for the south-west where it has been largely removed. A pedestrian doorway stands in the wall at the west end of each of the short ends of the garden. Details and coping are picked out using Staffordshire blue engineering bricks. The whole is cemented with a creamy white clean lime mortar. The south-west wall once supported a row of heated greenhouses on the outside; of which only the foundations and the dilapidated stub-walls of a boiler house now survive.

The heavily-buttressed north-west wall



Ruined boiler house on south-west wall

The wall at the south-west side stands (c9.68 feet) c2.95m above the interior ground surface (where counted on the west wall -clear of ivy- this equated to 41 courses). Where Test Pit 1 was dug there were five courses of walling brick below ground on three offset courses (Fig 2 and Photo Appendix, below).

The wall is 14.375inches (360mm thick) (3 bricks) above an external blue engineering brick plinth, below which it is 19in (480mm) thick (4 bricks). It is surmounted by a blue engineering brick coping.

Four courses rise a total of 13in (330mm). A typical red walling brick measures 9.25in x 4.375in x 3in (235mm x 110mm x 75mm).

At the centre of the garden is a deep dipping pond, reputed to be in excess of 10m deep at the centre and said to be linked to other water features elsewhere in the grounds of Bilton Grange. The depth and any links are unconfirmed.

It is a second aspect to this programme that the pond structure be photographically recorded, and this work will take place when the pond is cleared of considerable undergrowth, probably in autumn, 2012. The results will be set out in an expansion of the current report and also archived.

Results

Four test pits contained fully characterised archaeological remains which can be linked to the structure of the garden (Fig 2).

Test Pit 1

This was dug against the inside of the south-west wall of the garden. It measured 1.2 m x 1.2m in plan and lay at 121.335m above OD at the surface. The sequence below ground was as follows:

Below the turf lay dark grey loamy topsoil (1) to a depth of 300mm. Below this was medium-brown pebbly and clayey subsoil with sandy patches (2) a further 600mm thick. This overlay (3) the orange natural substrate, which comprised sandy clay with gravel and pebbles.

The south-western end of the trench was formed by the foundation of the garden brick perimeter wall (4). This stood upon three successive brick offsets. The uppermost offset comprised a course of headers, the middle one was a course of stretchers and the base offset was a row of bricks laid on edge. All were of the same brick type as the wall superstructure, but for two yellow-stock bricks within the base offset. At this lowest offset the wall must be at least 7 bricks thick, and up to 10 bricks thick if the arrangement is mirrored exactly at depth on the garden exterior.

Just to the north of the offsets, the natural substrate had been cut to form a gentle but pronounced slope, probably in order to drain groundwater away from the foundations, both while the mortar set and later during the life of the garden. Thus everything above had been thrown back in a swathe wider than the trench. As a result, there was no construction trench for the wall.

The soil sequence was straightforward and no garden features were present.

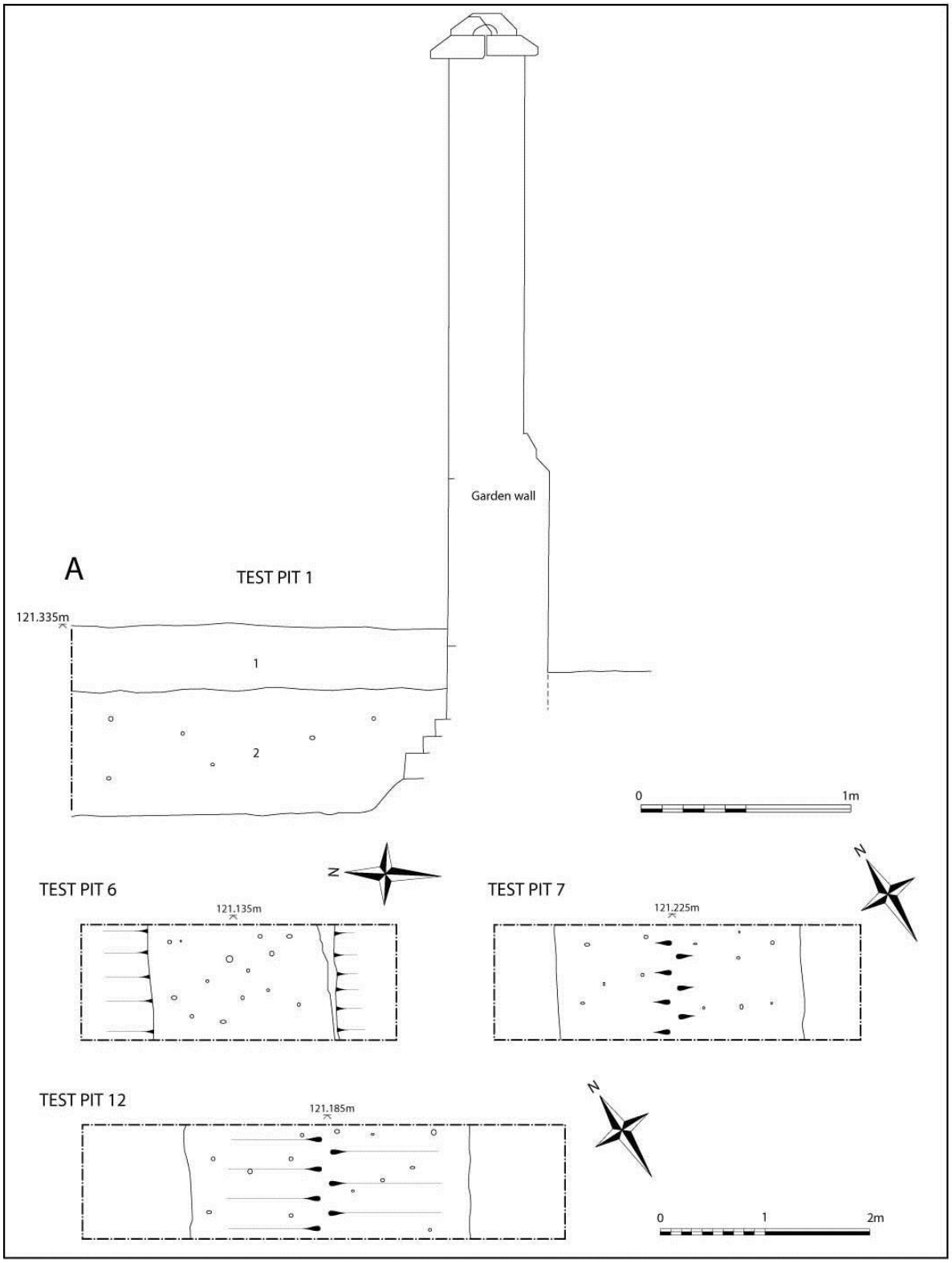


Fig 2: Section A (test pit 1) and plans of test pits 6, 7, 12

Test Pit 6

This trench was aligned approximately north-south and measured 3m long x 1.2m wide in plan.

Directly beneath the turf was exposed the heavily truncated base of a 1.7m-wide sand and gravel path (5) concentric upon the central pond. The pond-facing edge was lined with a sloping glacis of tarmac to prevent gravel spreading towards the pond edge. The opposite edge had also apparently been formed of tarmac but this had degraded. Topsoil (1) lay beyond the edges of the path base on both sides. The path had no wearing-course or top-dressing of gravel. The latter may have been lost c1990 when the garden was turned into the archery ground which survives today.

The modern ground surface here lies at 121.135m above OD and the gravel path base was c100mm below the turf.

Test Pit 7

Dug mid-way between the pond and the gate in the north-east wall, this test pit measured 3.5m long x 1.2m wide. Like test pit 6 it exposed the base of a former gravel path (5), this time 2.4m wide, with scattered former edges of tarmac, largely now lost. To either side lay dark grey loamy topsoil (1). Hereabouts the path retained a camber which is still visible as a low earthwork across the garden. The top dressing, assumed for the path, had not survived in this area.

The modern ground surface here lies at 121.225m above OD and the gravel path base was c100mm below the turf at the centre, deepening slightly with the camber to either side.

Test Pit 12

On the south-western side of the pond, this test pit was intended to mirror test pit 7, although it was longer, measuring 4.6m long x 1.2m wide.

Here too lay the basal remains of a gravel path (5), once edged in tarmac, the whole having been largely scraped away and having lost its gravel top-dressing. Dark grey loamy topsoil (1) lay to either side. The path here had been 2.6m wide, was slightly cambered, and its remains lay approximately 100mm below the turf. The modern ground surface here lies at 121.185m above OD.

Test Pits 4 and 10 (Fig 1)

In a further two test pits, 4 and 10, the survival of the truncated base of gravel paths to the gates in the long sides of the garden was confirmed, in both cases directly below the turf. Both test pits measured 1.2m x 1.2m in plan. Neither was extended although one located an edge to the eastern path, a location and alignment which indicates the path was approximately the width of the eastern gateway. For record photos of the sequence see Photo Appendix, below.

Test Pits 2, 3, 5, 8, 9 and 11 (Fig 1)

In the six remaining pits no structural remains of the garden were encountered. In each of these test pits the sequence present was loamy topsoil (1) over thick subsoil (2), down to the natural substrate (3). The thicknesses and overall depths varied considerably but this was the simple horticultural tilth of the garden. The results of these test pits, negative in that they contained no garden structure, are

summarised with the others in the table below. For photos of the simple sequence, see Photographic Appendix 1 below.

Test Pit/contents	OD level (m) of modern ground	Topsoil thickness	Subsoil thickness	Structural remains at
1	121.335	300	600	
2	121.375	150	500	
3	121.365	250	500	
4	121.195	100		Path base at 100mm
5	121.185	300	500	
6	121.135	50		Path base at 50mm
7	121.225	100		Path base at 100mm
8	121.155	500	400	
9	121.165	500	500	
10	121.195	100		Path base at 100mm
11	121.175	450	500	
12	121.175	150		Path base at 150mm
13 (Pond edge)	121.075			Surface concrete

Table showing depths thicknesses and levels of archaeology and other horizons in the garden.

Finds

Test pit 3 produced the only finds of the evaluation, two joining sherds in Brampton stoneware, a product of potteries near Chesterfield, Derbyshire. These are of 19th- 20th century production and derive from the very top surface of the subsoil. As such this merely records their deposition by deep-digging in the garden during its already known life. Consequently they have not been retained.

Summary and Conclusions

Twelve archaeological test pits were dug within the garden.

One was dug to investigate the base of the perimeter wall and its relationship to the garden (Test Pit 1). This showed that on the south wall at least the ground was thrown back to prepare for the foundation, leaving no construction trench. The wall sits upon an offset foundation.

Five test pits located the truncated remains of gravel paths, their surface seemingly stripped away to reveal the sandy, pebbly basal layer, formerly capped by *asphalte* (Test Pits 4, 6,7,10 and 12). This is the pattern of paths which appear on the Ordnance Survey Maps from the 1880s until 1905 and from 1926 until the 1970s. The alignment remained in use during the 19th and 20th centuries until the garden, for a while a commercial nursery (known locally as 'Barnards'), was given over to the current archery club in the early 1990s, when the paths were stripped, perhaps for the second time, in preparation for the establishment of a grass platt when the walled garden was rotivated prior to seeding the interior.

Six further test pits were dug which recorded merely the soil build-up and horticultural tilth in the garden (Test Pits 2, 3,5,8,9 and 11). This amounted to between 650mm and 1m total thickness.

Implications of the proposal to develop the garden

In assessing the impact of the current proposal to create a hockey pitch within the walled garden the Brief drew attention to the potential relationship between the walled garden and role of architect A W N Pugin. It noted 'The Bilton Grange School, and the associated walled garden, were designed by Pugin for Captain J. Washington Hibbert and constructed between 1841-1846. This garden has been described by the Garden History Society as 'a unique example of a landscape feature designed by Pugin'. In addition to having an impact upon the central garden pool, there is a potential for the groundworks associated with this development to impact upon features associated with this historic garden'.

The summary and conclusion of the test pit evaluation is that the surviving archaeological evidence comprises the insubstantial remains of the basal layers of four paths which quartered the walled garden. The paths, also identifiable as parch marks on aerial photographs from the early 21st century, were laid out in a similar pattern to that first illustrated on an indenture of property belonging to Captain Hibbert in 1855 (Fig 3). This pattern was subsequently illustrated in 1861 on the sale catalogue of the Bilton Grange Estate (Fig 4). The pattern of paths on both the indenture and sale catalogue show the simple cruciform layout, though the early plan does not show the central pond and the indenture appears to show paths flanking the enclosing walls.

The simple cross design for the paths is typical of kitchen gardens of the period and is not unique. Whilst Pugin is not known for his garden designs (Atterbury and Wainwright 1994) as Elliot has noted 'The elevation of thirteenth century as the norm for Gothic, beginning in the late 1830s, eventually segregated Tudor from true Gothic, depriving Gothic buildings of any authentic models for gardens; a Pugin sketch for Scarisbrick Hall shows a quartered parterre without any specific period allegiance' (Elliot 1986, 67-8).

At Bilton Grange there is no specific evidence to link Pugin to the design of the interior of the walled garden, although the walls and the gardener's cottage (see Appendix 2) are both part of the Pugin design. Pugin was, however, responsible for the design of the Gothic Conservatory, which the 1861 sale particulars refer to as a "*Magnificent conservatory of gothic design 100ft in length*". It adjoined the south elevation of the house overlooking the formal gardens. This feature, designed by Pugin, supplemented an earlier range of lean-to glasshouses and was later described by Burke (1852) as:

"The most remarkable feature of the grounds is the Conservatory. It is gothic in style – in that respect unique – and a hundred yards in length, containing so many rare plants that their value has been lately established at no less than fifteen hundred pounds"

The Colson Stone assessment has suggested this may 'point to Captain Hibbert having a particular interest in horticulture, and indeed there was a precedent for this within his family. A cousin, George Hibbert of Chalfont (1757-1837), a merchant and Member of Parliament for Seaford sponsored

numerous botanical expeditions to the Cape and West Indies and was described by J.C.Loudon in his "*Encyclopaedia of Gardening*" as: *"An opulent commercial [man, who] may be mentioned as [a] great encourager of exotic botany."'*

In 1861 the Sales catalogue described the walled garden:

"The kitchen garden containing about 2 acres is enclosed on every side by a substantial 10ft brick wall with buttresses and coping and has 4 entrances through solid oak doors with a gothic arch at each. It is intersected by broad asphalte[1] walks and in the centre is a large reservoir into which the garden is drained, affording a constant supply of soft water. There are outer slips on three sides with a melon ground, a winter house and a small vinery. The walls are covered throughout with the choicest fruit trees, beautifully trained and in full vigour. The gardeners house; adjoining is a very substantial building of ornamental character, with stone dressings, and in keeping with the mansion."

The walled garden at Bilton Grange was subsequently illustrated on the first edition OS 1886 (1:10,560) and on the 1st edition 1:2500 of 1887 both of which portray the cruciform path designs. A photograph from c.1900 reproduced by Colson Stone (2006) shows the highly cultivated character of the walled garden at the turn of the century. However, the paths are not present on either the 1906 (1:10,560) or the 1905 (1:2,500) editions of the OS. At best this implies the paths had been overgrown and perhaps grassed during this period or that the walled garden was more intensively used by the school as a kitchen garden and paths removed. The paths, in slightly altered form returned to the OS editions by 1926 and are visible on aerial photographs from 1947 (Colson Stone 2006, Fig 27) remaining until the 1990s. During this period the walled garden was occupied by a plant nursery. Subsequently the walled garden was flailed twice, chemically treated and rotivated prior to re-seeding as mown grass (thanks to the Archery Club Secretary for his information on the ground-works involved at the time).

The implications of the evaluation, photographic, documentary and map evidence are threefold. In terms of structural survival, although the remains of cruciform paths survive beneath the surface of these paths has been entirely removed. This may have taken place during the period 1905 to 1926 during an hiatus suggested by the OS mapping or later when the walled garden was rotivated following the closure of the nursery in the 1990s. Narrow bands of asphalt flanking the path base in Trench 12 indicate the extent of loss. In addition despite the structural evidence no documentary evidence has been found to establish a firm link between the layout of the walled garden and a design by Pugin. Lastly the implications of the Colson Stone report that the cruciform paths represent a standard format perhaps influenced by Captain Hibbert's horticultural interests also remain unproven. However, Morgan and Richards (1990, 129) in discussing the typical walled kitchen garden note that 'borders and glass houses were separated from the main ground in the centre of the enclosure by a perimeter path wide enough to accommodate heavily laden barrows and carts, and to allow groups of visitors to stroll at their ease. Further paths divided the open ground into four or more sections – always called quarters – depending on the area'. The latter suggests that the cruciform paths were typical of the period rather than a unique expression of A W N Pugin's design skill.

[1] Asphalte was first patented in retain in 1838 and initially used for paving .

Figure 3:
Bilton Grange
Indenture 1855

N

Bilton Grange

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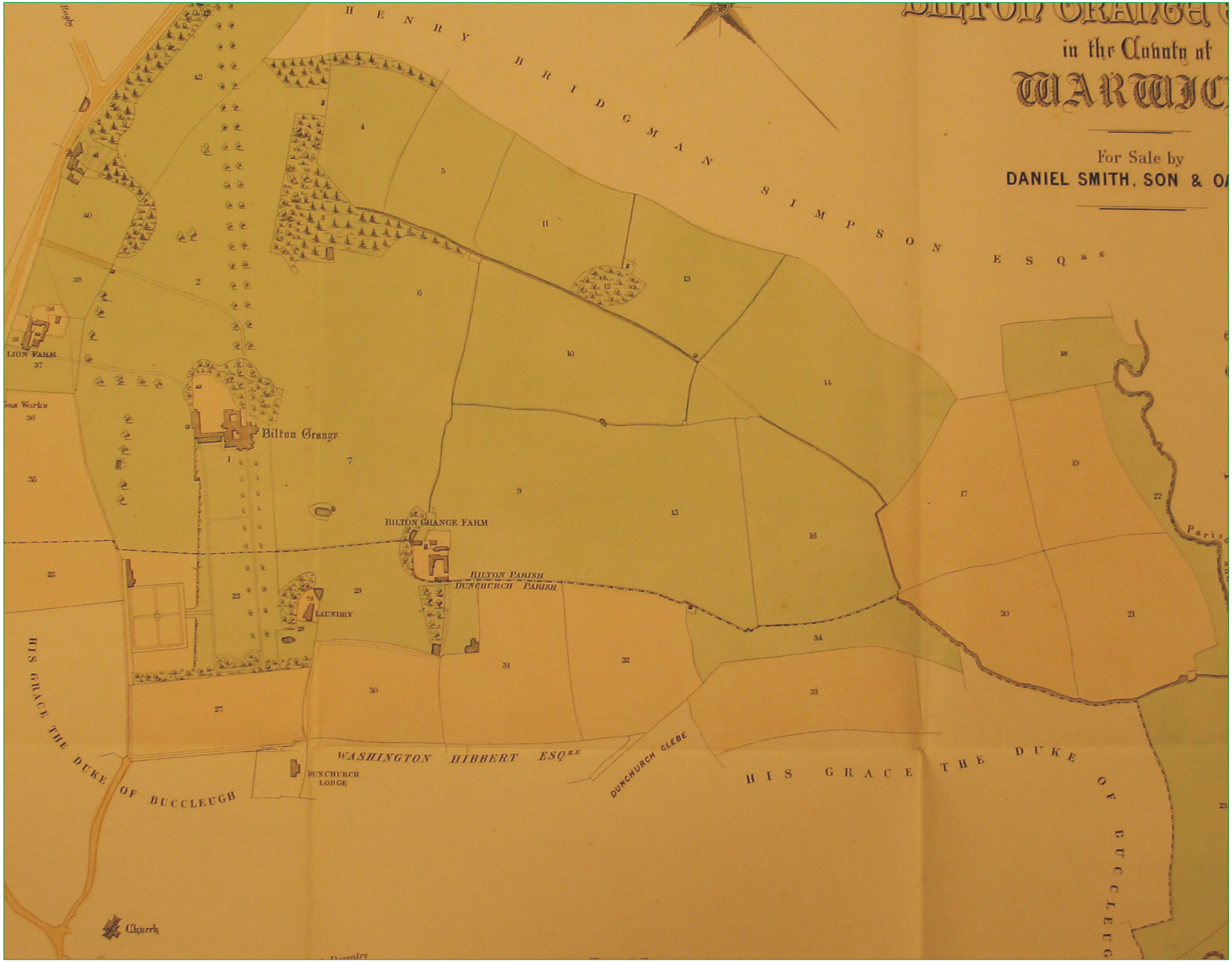

Figure 4:
Bilton Grange
Sale Plan 1861

Bilton Grange

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Proposal: The creation of an all-weather sports pitch.

Mitigating Factors: the topsoil has no historic value, having been in constant use from c1850-c1990. The paths structure which would be lost are all truncated and represented only by their sub-base and the vestiges of an asphalte surface removed when the garden was prepared for its current grass-plat around 1990 or between 1905 and 1926. There is no reason to assume that paths are not accurately represented on Ordnance Survey maps from the 1880s right up to the 1970s. The physical survival of the structure of the central pond is not under threat.

Impact: Consent has been granted to construct an all-weather hockey pitch within the walled garden at Bilton Grange, itself part of the registered park and garden of Bilton Grange (Grade II) and a listed building (Grade II). Development will involve the removal of topsoil, the insertion of drainage, partial retention in situ and drainage of the central pond. The evaluation has failed to demonstrate a clear link between the surviving remains of cruciform paths within the walled garden and a specific design of the architect A W N Pugin. Furthermore the remains of the paths are heavily truncated, and there is no indication that their historic *asphalte* surfaces from the 19th century survive nor that evidence of their post-1926 character remains. At the same time there is a large body of documentary evidence, written, graphic and photographic which survives as evidence of the paths form and character during the 19th century. What remains are insubstantial path bases which are today invisible at ground level. Consequently for the purposes of the NPPF the removal of the path bases and the impact of development on the historical environment will be less than substantial harm.

Archaeological mitigation: none is proposed as no significant remains will be lost which have not already been recorded or have been shown to be accurately depicted. The pond will be recorded before it is lost from view and the data archived for heritage purposes.

Bibliography

Atterbury P, Wainwrght C 1994 Pugin A Gothic Passion, London:Victoria and Albert Museum

Burke, Sir B 1953-55 A Visitation of the seats and arms of the Noblemen and gentlemen of Great Britain and Ireland, London:Hurst and Blackett

Colson Stone, 2006 Bilton Grange, Dunchurch, Warwickshire: Historic Landscape Survey and Conservation Plan, Taunton:Colson Stone

Edwards, M, 1996 More than a school to us: a history of Bilton Grange, Dunchurch:Bilton Grange

Elliot B 1986 Victorian Gardens,London:Batsford

Harley, L S, 1974 A typology of brick, Jnl Brit Archaeol Association, 3rd series vol 37, 63-87

Hill, R, 2007 God's Architect: Pugin and the building of Romantic Britain, London:Allen Lane

Morgan J, Richards A 1990 A Paradise out of a Common Field, The Pleasures and Plenty of the Victorian Garden, London:RandonCentury

Warwickshire Gardens Trust, 1997 A brief history of Bilton Grange

Documentary Sources (Warwickshire Records Office)

Bilton Grange Indenture 3rdApril 1855 (CR1091/151)

Bilton Grange Sale Particulars 1861 (CR EAC 411)

Appendix 1

Record photographs showing Test Pits containing structural remains (For locations see Fig 1)

(Scale 1m in all cases)

Test Pit 1, looking south-west.

Test Pit 4, looking north-east

Test Pit 6, looking south-east to pond

Test Pit 7, looking north-west

Test Pit 10, showing path to SE gate

Test Pit 12, looking north-west

Record photographs containing only the soil build-up (For locations see Fig 1)

Test Pit 2, looking north-west

Test Pit 3, looking north-west

Test Pit 5, looking north-west

Test Pit 8, looking north-east

Test Pit 9, looking north-east

Test Pit 11, looking south-east

Appendix 2

DUNCHURCH
SP 4871
BILTON GRANGE
1724/11/10027
Gardener's Cottage and attached
Garden Walls at Bilton Grange
II
Gardener's cottage and attached garden walls. c1846, for Capt J H Washington Hibbert, with mid and late C20 alterations. Red brick, with roofs with bands of fish- scale tiles and coped gable stacks. Rebated eaves. 2 storeys: 3/1 bays. Windows are mainly original iron framed glazing bar casements with stone surrounds and mullions. Front has central gabled porch with Tudor arched opening and on each side, a 4-light casement with wooden mullions. To left, an original 2-light window, and to right, a late C20 casement. Above, 2 through-eaves dormers with steep pitched gables, with 2-light casements. Rear elevation has a similar dormer in the centre. Lower single bay projection, to right, has a C20 window to the front, and 2 original single casements to the rear. Right gable has an original2-light window. Left gable, facing the gardens, has to left a narrow single-light window, and in the gable, a floral panel Garden walls, enclosing a square approx 200m on a side, have plinth, external buttresses and gabled tile coping. On E, Wand N sides, a central entrance with chamfered and rebated Tudor arched doorway and original double doors, under a tiled hipped canopy. The gateway to south has been replaced. Adjoining the gardener's cottage, a smaller, single pointed arched doorway with original door. In the centre, an octagonal pond, approx 10m across, with stone kerb and 4 sets of steps aligned on the garqen gateways. INTERIOR: Cottage has largely original plan. Original staircase with chamfered square newels and panelled balustrade to stairs and landing. Main ground floor room has original fitted cupboard. First floor has an original chamfered fireplace surround and several original doors.

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