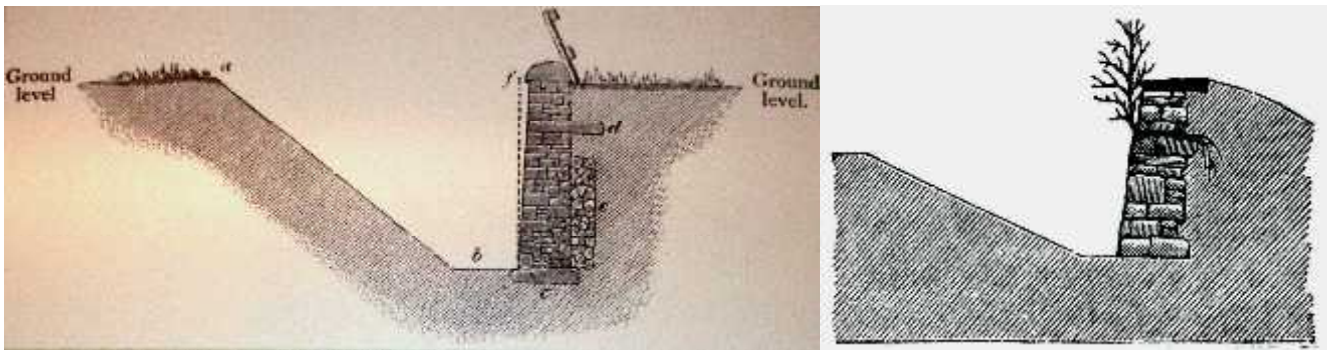


## ***Representation of ha-has on OS six-inch mapping***

***Paul Bishop<sup>1</sup> and Richard Oliver<sup>2</sup>***

A ha-ha (also called a ha-ha fence or an aha! fence) is a sunken barrier to separate the viewer from a parkland setting in a naturalistic designed landscape, without having to use a substantial conventional (above-ground) fence that interrupts the view of the parkland landscape and grazing animals (*figures 1 and 2*).



*Figure 1. Left: Cross-section of a ha-ha from the display about Cally House in the Mill on the Fleet, Gatehouse of Fleet, Kirkcudbrightshire, Scotland. The low fence at upper right is not always present.*

*Right: Cross-section of a ha-ha without a fence.<sup>3</sup> In both cases, the ha-ha is designed for a view from right to left, from the sunken wall side of the ha-ha.*



*Figure 2.  
A ha-ha on the Dougalston Estate, near Milngavie, East Dunbartonshire. This ha-ha is designed for a view towards the camera.*

The name ha-ha or aha! is presumed to derive from the fact that the barrier is

<sup>1</sup> Paul Bishop is a Professor in the School of Geographical & Earth Sciences, University of Glasgow. The initial aim of this work was to assess whether OS mapping would yield insight as to the timing of ha-ha construction on Dougalston Estate, Milngavie. That timing has yet to be established and is being investigated in ongoing collaboration with Professor Michael Moss (University of Glasgow), who is thanked for his insights.

<sup>2</sup> Richard Oliver holds an honorary research fellowship in the history of cartography at the University of Exeter.

<sup>3</sup> From DE McGuire, *Agricultural Improvement in Strathkelvin 1700-1850*, Bishopbriggs: Strathkelvin District Libraries & Museums, 1988, p.22.

essentially invisible until one is right on it (*figure 3*), and there is the likelihood of coming across the depression unexpectedly when walking or riding.



*Figure 3. Left: view across a ha-ha on Dougalston Estate, Milngavie. The ha-ha (right) is at the foot of the large tree trunk in the left hand photo.*

The ha-ha is a key element in the eighteenth century's move to the more naturalistic designed landscape so closely associated with the famous landscape gardener Lancelot 'Capability' Brown who set up his practice in England in 1750<sup>4</sup>. Horace Walpole credited Charles Bridgeman with inventing the ha-ha<sup>5</sup>, apparently unaware that the idea dates back to Dezallier d'Argenville<sup>6</sup>, and it was Brown and associates who exploited the ha-ha, often with considerable flamboyance<sup>7</sup>. The idea of the ha-ha "was to unify the garden and the countryside, or, in Walpole's words, to set the garden free 'from its prim regularity, that it might assort with the wilder countryside without'."<sup>8</sup> Figure 3 (left) provides an example of this effect.

One of us (PB) has been surveying and mapping ha-has on the former Dougalston Estate, near Milngavie, to the north of Glasgow. Dougalston was purchased in 1767 by John Glassford, one of the famous, fabulously wealthy Tobacco Lords of Glasgow<sup>9</sup>. The 'conventional wisdom', repeatedly reiterated (probably from a nineteenth century account<sup>10</sup>), is that Glassford was responsible for the complete re-modelling of the parklands around Dougalston House: "Streams were diverted to form an artificial lake, Dougalston Loch, some 300 acres in extent .... Walks, arbors, gardens, ponds, orchards and plantations were

<sup>4</sup> D Brown, 'Lancelot Brown and his associates', *Garden History* 29 (2001), 2-11.

<sup>5</sup> H Walpole, *On Modern Gardening*, 1780.

<sup>6</sup> A-J Dezallier d'Argenville, *La théorie et la pratique du jardinage*, Paris, 1709.

<sup>7</sup> Plate 1 of Brown, *op. cit.* shows a detail of Capability Brown's plan for a new garden at Badminton, with D Brown drawing particular attention to what he calls 'the rather Rococo ha-ha', a wavy ha-ha separating surrounding fields from the plantings, which Capability Brown had made more irregular.

<sup>8</sup> J Phibbs, 'The Englishness of Lancelot "Capability" Brown', *Garden History* 29 (2001), 122-140.

<sup>9</sup> TM Devine, *The Tobacco Lords*, Edinburgh: John Donald, 1975.

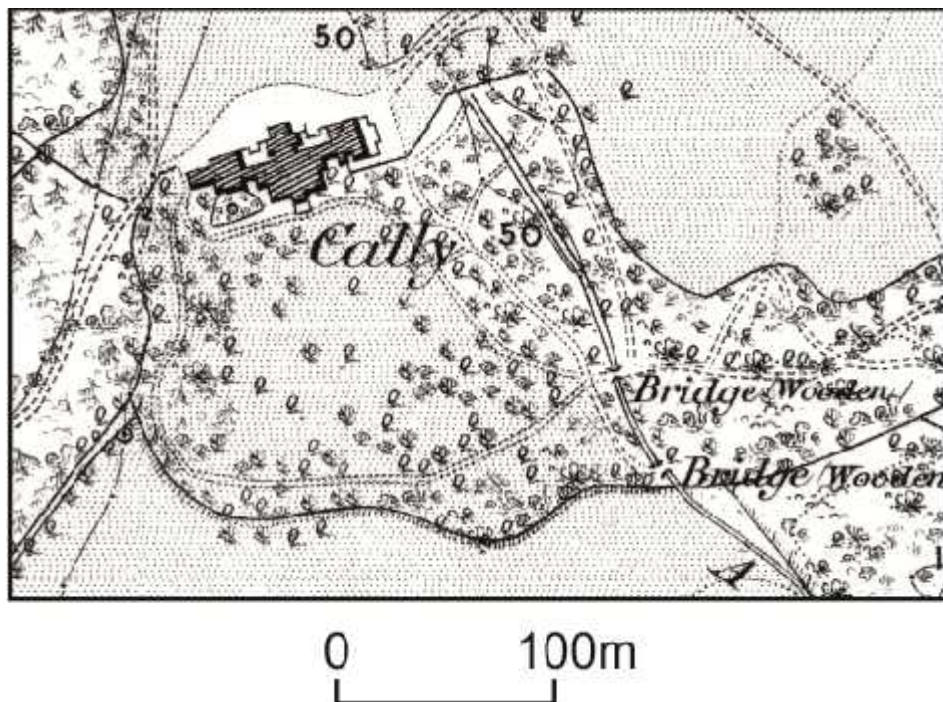
<sup>10</sup> J Gourlay, *A Glasgow Miscellany*, Glasgow: privately printed, no date (but nineteenth century).



all meticulously landscaped and traces of these can still be seen although in a rather wild and disorderly state.”<sup>11</sup> Ha-has are part of these wild and disorderly remains and the implication that John Glassford was responsible for them and for the transformation of Dougalston to parkland garden has important ramifications for understanding garden history in Scotland and Britain more widely. At the simplest level, we want to understand if John Glassford, who died in 1785, was indeed responsible for converting Dougalston to a naturalistic parkland garden in the late 1760s and the 1770s. OS first and second editions six-inch mapping is being consulted as one part of this investigation into when the Dougalston ha-has might have been created.

### ***Mapping ha-has***

PB consulted RO on whether the OS has an accepted mapping symbol for ha-has. Our email exchanges led us to conclude that relatively few ha-has are mapped. PB then consulted David Steel from Gatehouse of Fleet where there are displays in the Mill on the Fleet highlighting ha-has at Gatehouse’s Cally House (*figure 1*). David identified extant ha-has in Cally Estate and these were then found on the relevant six-inch first edition map (*figure 4*).



*Figure 4. Ha-ha to the south of Cally House, Gatehouse of Fleet. The mapping symbol consists of a continuous line marking the wall along the vertical side of the ha-ha and pecked lines marking the slope. Note how the path (double dashed symbol) on the Cally House side of the ha-ha is on the wall side of the ha-ha, as is normal. The ha-ha can be seen passing laterally (to both the west and the east) into a fence, presumably once the views from the house were obscured and the ha-ha’s effect was no longer sought. (From six-inch first edition Kirkcudbrightshire sheet 43).*

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<sup>11</sup> CM Castle, *John Glassford of Dougalston*, Milngavie and Bearsden Historical Society, 1989, 15. Devine, *op. cit.* presents the same material.

The way in which the ha-ha passes laterally into conventional fences is noteworthy, and confirms that the ha-ha fulfils the role of a fence. This lateral passing from ha-ha to conventional fence can be seen on the ground in Dougalston (*figure 5*).



*Figure 5. The lateral passing from a ha-ha (left) to a fence on Dougalston Estate, Milngavie; the first post of the fence is a metal post in centre picture, and the fence line, now hidden in the shrubs, extends downhill away from the camera. The view from the estate mansion house would not have reached this point and so a ha-ha was unnecessary.*

A second ha-ha is mapped with the same symbol at Cally House (*figure 6*). David Steel has provided extracts from Cally House accounts that confirm its construction as a ha-ha:

'1819 To cutting an aha! fence ... measuring 5132 cubic yards @ 6d	£128.6.-
To carting away from said fence the whole of the had earth 400 days of one horse and cart at 4/-	£ 30.-
To turfing the top of the stone wall built in said fence & top dressing the whole line, 117 roods at 5/-	£ 29.5.- <sup>12</sup>

<sup>12</sup> Accounts in the entailed estate record for Cally in the Kirkcudbright Sheriff Court papers (National Archives of Scotland SC 16-64-5-00034). We do not understand how the 400 days at 4/- amounts to £30; perhaps it is a mistake for £80. We sincerely thank David Steel for providing us with the Cally Estate accounts.



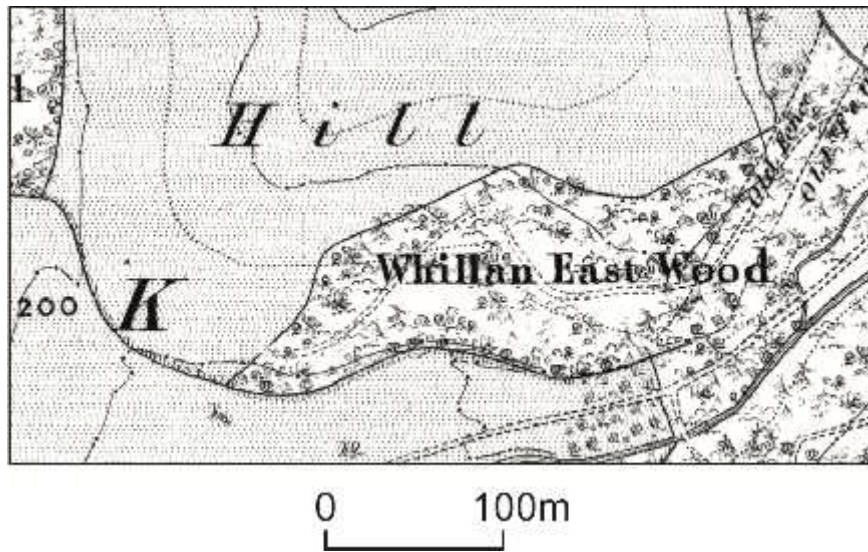


Figure 6. The Whillan Hill ha-ha referred to in the Cally estate accounts above. Note that the ha-ha running eastwards from the western corner of Whillan East Wood has the wall on the northern side of the ha-ha and the slope on the southern, whereas the wall and slope have swapped sides in the ha-ha that appears to continue westwards from the western corner of Whillan East Wood. (From six-inch first edition Kirkcudbrightshire sheet 43).

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### **Dougalston ha-has**

It transpires that one ha-ha is mapped in Dougalston Estate (figure 7). Among the intriguing issues here are: (i) that the path seems to be on the wrong side of the ha-ha for the north-westwards view, across the ha-ha towards the dovecot, picturesquely sitting on a low rise (figure 8); and (ii) that the ha-ha is not mapped in the six-inch second edition (figure 9), despite the ha-ha being still clear on-the-ground (figure 10). The many hundreds of metres of other ha-has on Dougalston Estate are invisible on OS mapping.

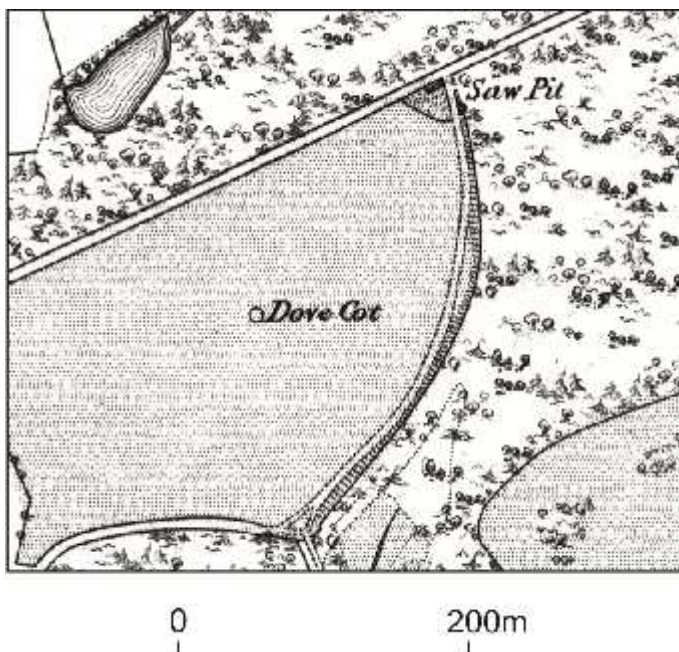


Figure 7.  
The Dovecot ha-ha on  
Dougalston Estate. (From six-  
inch first edition Stirlingshire  
sheet 32).

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of the University Librarian,  
University of Glasgow



Figure 8.  
The Dovecot (pigeon house; currently more usually 'doocot') on Dougalston Estate, viewed across the depression (foreground) marking the degraded ha-ha, which has been smoothed and somewhat infilled where it crosses a golf course fairway. Just to the left of this photograph, the ha-ha is intact (figure 10), with the wall on the side of the ha-ha closer to the camera confirming that the view was towards the doocot.

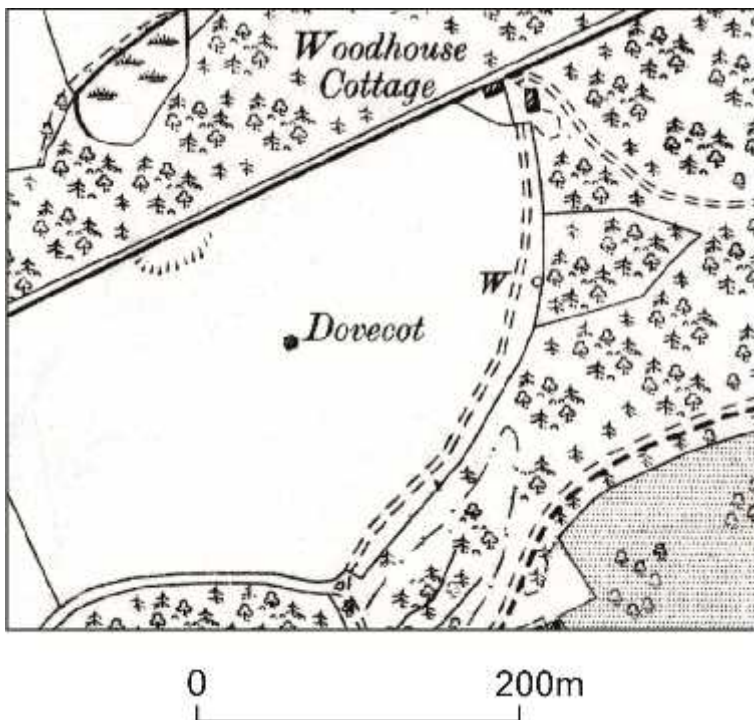


Figure 9.  
Second edition map of the same area as in figure 7, showing lack of mapping of the ha-ha, which is still present (figure 10). (From six-inch second edition Stirlingshire sheet 32.NW). Reproduced with the permission of the University Librarian, University of Glasgow



Figure 10.  
Contemporary picture of the doocot ha-ha, Dougalston Estate. The doocot is to the right of this picture.



### ***Other hidden fences***

To ‘unify the garden and the countryside’, Cally Estate also uses a sunk dyke, which can be thought of as a double ha-ha, with sloping walls either side of a stone wall (*figure 11*). Cally Estate accounts record the location, date and construction of the sunk dyke, with the sloping walls on each side of the excavation confirming that the “aha fence” in this case is a sunk dyke:

‘1821 To excavating ... for an aha fence ... 6756 cubic yards @ 6d	£163.18.-
To sloping & dressing the banks on each side of the cut & covering the same with good earth & preparing it for sowing out	£ 85.-.-
To building the stone wall in bottom of the aha fence ... & turfing it on top, 65 roods at 50/-	£162.6.- <sup>13</sup>



*Figure 11.  
The Cally Estate sunk dyke,  
topped with a layer of turf to  
assist in its blending in with the  
ground surfaces on either side.  
Photo kindly supplied by Ken  
Smyth of the Mill on the Fleet in  
Gatehouse of Fleet*

As before, the first edition and second edition (or more correctly, the New Series 1896) are at odds (*figure 12*). The first edition appears to map the sunk dyke as a double (or triple) line but the implied ‘meaning’ of the mapping symbol is unclear. The New Series maps it very clearly and comprehensibly as, in effect, a double ha-ha, with a fence down the centre, between the two opposing slopes. The six-inch edition of 1909 repeats the New Series 1896 mapping.

<sup>13</sup> *Ibid.* Again, we cannot explain some of the arithmetic in these accounts, except as clerical errors.

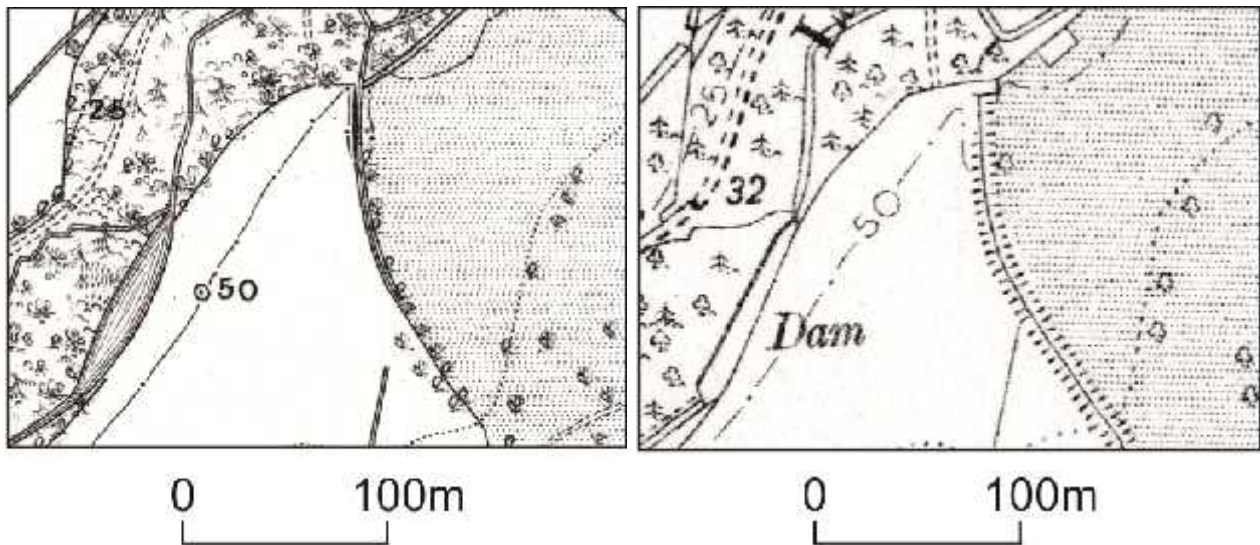


Figure 12. Extracts from the first edition (left) and New Series 1896 (right) six-inch maps of the Cally sunken dyke shown in figure 11.

### **Comparisons in England**

The other of us (RO) investigated the depiction of some ha-has known to him in England. Five of these survive today, and their recent condition can be checked from photographs; a sixth has disappeared, but it first came to attention because of the way in which it was clearly depicted by the OS.

This vanished ha-ha was at Cheam Park in Surrey, which appears on the 1:2500 revised in 1910.<sup>14</sup> The house with which it was associated was built at some time between 1820 and 1842, and was demolished by a flying bomb in 1944; the ha-ha was filled in at an unknown later date.<sup>15</sup> It is mapped as a ditch with slopes on both sides, and with a solid line on the 'house' side (figure 13). At present we have no evidence of its depth.

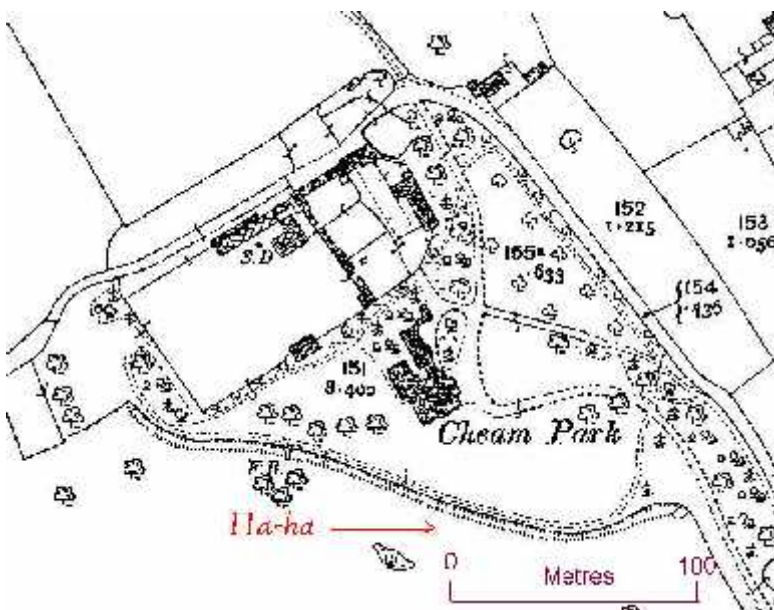


Figure 13.  
The Cheam ha-ha (from the Surrey sheet 13.12, revised in 1910).

<sup>14</sup> RO encountered it in the course of perambulating the sheet whilst preparing notes for the reduced-scale reprint by Alan Godfrey.

<sup>15</sup> Information board at Cheam Park, seen on 28 February 2012.



The five surviving ha-has are not mapped consistently. There are ha-has in front of the principal show-front of the house at Killerton Park (Devon), Attingham (Shropshire) and Hardwick (new) Hall (Derbyshire); all are omitted from both the original survey and subsequent revisions, on both 1:2500 and six-inch scales. All when seen were about four feet deep.<sup>16</sup> The ha-ha that surrounds Wollaton Hall in Nottinghamshire on the north-east, east and south-east sides is also about four feet deep, and is mapped at both 1:2500 and six-inch, in both the original survey of 1879-83 and the revisions of 1899 and 1913.<sup>17</sup> The fifth, and in some ways most remarkable, example is Brocklesby in Lincolnshire, where there is an extensive ha-ha system south of the house, and where 'Capability' Brown is known to have worked in the 1770s.<sup>18</sup> This is shown on the first edition of the 1:2500 and six-inch, surveyed in 1886; it also appears on the second edition of the 1:2500, but is not shown on the six-inch mapping derived therefrom. Unlike the other four surviving English ha-has considered here, it appears on recent OS 1:25,000 mapping. The ditches do not now appear to be significantly deeper than those at Attingham, Hardwick or Wollaton.<sup>19</sup>

Common to all five surviving ha-has is that the first edition six-inch mapping was prepared by direct photo-reduction of the linework and 'ornament' from the 1:2500, whereas the six-inch second editions are analogous to all the editions of the six-inch in Scotland, in that they were produced by re-drawing. It is therefore unsurprising that the six-inch first edition mimics whatever is included or excluded from the 1:2500, but inclusion or exclusion from the second edition implies a conscious cartographic editorial decision. Two inconsistencies emerge. First, assuming that the depth of each ha-ha has not changed significantly since the late nineteenth century, then there would seem to be inconsistency of treatment in the original survey between Attingham, Hardwick and Killerton on the one hand, and Wollaton and Brocklesby on the other. Second, whereas the Wollaton ha-ha continued to be shown on the six-inch, that at Brocklesby did not. The decision whether or not to map ha-has on revision of the 1:2500 might have been guided by their inclusion or exclusion from the previous edition, but this does not explain the apparent inconsistency in their treatment on the six-inch.

One possible explanation for ha-has sometimes being mapped in a way to suggest that they were fences without ditches, as at Attingham and Hardwick,

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<sup>16</sup> Attingham was visited in September 1985 and Hardwick in October 1993: both were photographed, and this enables an approximate estimate of depth. Attingham was surveyed in 1881, Hardwick in 1875. Killerton was surveyed in 1886-7 and visited in August 2012.

<sup>17</sup> Visited and photographed September 1997. The date 1879-83 appears on Nottinghamshire sheet 41.8; the area-book for the parish is dated 1883, so perhaps the 'ground truth date' is closer to 1883 than 1879.

<sup>18</sup> Nicholas Pevsner and John Harris, *Lincolnshire* (The Buildings of England series), 2nd edition, revised Nicholas Antram, London: Penguin, 1989, 188.

<sup>19</sup> Unlike Attingham, Hardwick and Killerton (National Trust) or Wollaton (municipally owned), Brocklesby is not readily accessible to the public, and RO is grateful to Ben Duncan for making the necessary arrangements with the Brocklesby estate office for a visit in October 1994.

might be that they were seen as analogous to such features as railway station platforms, which were (and are) similarly shown by firm lines, with no indication of a difference in level.

It is perhaps worth noting that an investigation of the 11,785 tithe maps of England and Wales yielded a total of five indications of ha-has. That at Deane in Hampshire is called 'Ha! Ha!' and shows a fence apparently running along the bottom of the ditch (as illustrated in figure 11), which suggests slopes on both sides rather than the pattern illustrated in figure 10.<sup>20</sup>

### ***Why did/does the OS not map ha-has and other hidden fences?***

It seems strange that the OS did not map ha-has systematically. The Cally Estate accounts and the ha-ha's function confirm that the ha-ha is undoubtedly a fence, and it is equally clear that the OS placed great store on mapping fences correctly: "Fences ... are a most important detail. Proved neglect to insert a fence new since the last revision, or to cancel one that has been removed, is a grave offence, usually punished by reduction or loss of pay".<sup>21</sup> Perhaps in the case of Dougalston it was decided that the majority of the ha-has had ceased to function as fences and that the doocot ha-ha still fulfilled that function when the first edition was being surveyed, but had ceased to do so by the time of the second edition. Nonetheless, ha-has are substantial landscape features<sup>22</sup>, and it seems odd that they would not be mapped, even if they had ceased to function as fences. Moreover, the cessation of a fence functioning as such does not deter the OS in other contexts. Indeed, the Whillan Hill ha-ha on Cally passes to its east into a fence line, as we have already noted, and this fence itself in turn passes to its east into a dashed line labelled as 'Old Fence' (with another 'Old Fence' paralleling it just a few metres to its northwest!) (*figure 6*). As a side point here: the six-inch first edition *Kirkcudbright* sheet 43, which includes Gatehouse of Fleet and is the source of the Cally House extracts used here, maps (somewhat idiosyncratically?) several 'Old Fences'.

We would be pleased to hear from CCS members on whether they have spotted ha-has or sunk dykes on OS maps, or if they know of instructions or other documentation related to these features. As we have already noted, they are substantial features and we might expect that they would have been mapped more routinely and systematically.

*All photographs except figure 11 are by Paul Bishop*

<sup>20</sup> These are (all references are to The National Archives (TNA)): Brampton, Cumberland (IR 30/7/28); Bywell, Northumberland (IR 30/25/91); Charlton Musgrove, Somerset (IR 30/30/99); Deane, Hampshire (IR 30/31/76); Wishaw, Warwickshire (IR 30/36/161).

<sup>21</sup> Instructions to field revisers 1/2500 scale, 1932, s.32: copy at TNA OS 45/20.

<sup>22</sup> Some of the Dougalston ha-has are about 5 feet deep on the wall face.