

Burgage plot patterns and dimensions in four Scottish burghs

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ABSTRACT

A comparison is reported of cartographic studies that have been made of the burgage plots in Edinburgh, Canongate, St Andrews and Perth. The results confirm and extend those of earlier studies of St Andrews and Perth. In particular, the presence of plots differing in width by quarter-widths is confirmed. The earlier reports of some plots not complying with this scheme are discussed, and it is demonstrated that the plot widths in the four burghs all do in fact conform. It is suggested that the plots were set out to these varying widths rather than the pattern resulting from later subdivision and amalgamation of plots of uniform width. Possible measurement units which may have been used in setting out the plots are discussed. A systematic pattern of the closes used to access the backlands is reported and it is suggested that a degree of central control is likely to have been exercised over their positioning.

INTRODUCTION

The initial major stimulus to found and develop Scottish burghs came from David I (1124–53) and a number of burghs were granted their Royal Charter in the first half of the 12th century (MacQueen & Windram 1988: 208–9; Lynch, Spearman & Stell 1988: 3; Ewan 1990: 1). Potential settlers were attracted to a new burgh. They were each allocated a carefully delineated plot of land on which they were expected to establish and occupy a dwelling house within a specified period of time, and during this time they were excused from paying dues and taxes. They then became burgesses of the burgh with both privileges and responsibilities (Ewan 1990: 92–3).

The plots of land, known as tofts or burgage plots were long and narrow, extending back from the street and with the dwelling normally located on the foreland. In the early days, the backlands were used for raising livestock, the tending of

crops and for small scale manufacturing and other purposes. In later years, the backlands were increasingly built over, the new buildings normally conforming to established plot boundaries (Coleman 2004: 293–6). For centuries, the integrity of the plot boundaries was maintained under the supervision of a burgh official known as a Liner (Ewan 1990: 49). As a result, boundaries are clearly identifiable today in many Scottish burghs.

The systematic study of burgage plot patterns and dimensions in Scotland was strongly influenced by town plan analysis as used by Conzen at Alnwick in Northumberland (Conzen 1960). Conzen's approach consisted of a systematic examination of the town plan, the building forms and the patterns of land usage. The constituent elements of the town plan were carefully analysed, including the street system, street blocks defined by that system and within each street block, the buildings and land plots, including the burgage plots. The approach

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also made use of historical and architectural information.

A broadly similar approach was taken by Brooks and Whittington in their study of St Andrews (Brooks & Whittington 1977). Their work was greatly aided by the survival of a relatively large number of charters dating from the time of the foundation of the burgh onward. Few archaeological reports were available at that time to aid interpretation, but by the time that Spearman prepared his analysis of Perth in 1988, a considerable body of archaeological information about the Scottish burghs was beginning to accumulate. Spearman was now able to add a powerful new tool to town plan analysis (Spearman 1988). Since that time, inclusion of archaeological evidence in town plan analysis has continued and developed. Of particular significance are the reports on over twenty Scottish burghs produced by the Centre for Scottish Urban History in the Scottish Burgh Survey series. A review of such information relating to a number of Scottish burghs has been published (Coleman 2004).

The Alnwick, St Andrews and Perth studies all include the results of measurements of the dimensions of the burgage plots. In all three papers, the plots in a particular street block were found to be of variable width and the most frequently encountered or modal width was noted. In all three burghs the presence of plots of three quarters, one and a quarter and other multiplicities of this modal plot width was reported (Conzen 1960: 33; Brooks & Whittington 1977: 288; Spearman 1988: 55–7). For convenience, this is described here as a quarter-plot scheme. The presence of other plots which did not apparently fit into the quarter-plot scheme at Perth was noted (Spearman 1988: 57).

The purpose of the present study is fourfold:

- (a) To re-measure the plot dimensions at St Andrews and Perth using the digitised online version of the relevant Ordnance Survey (OS) First Edition maps

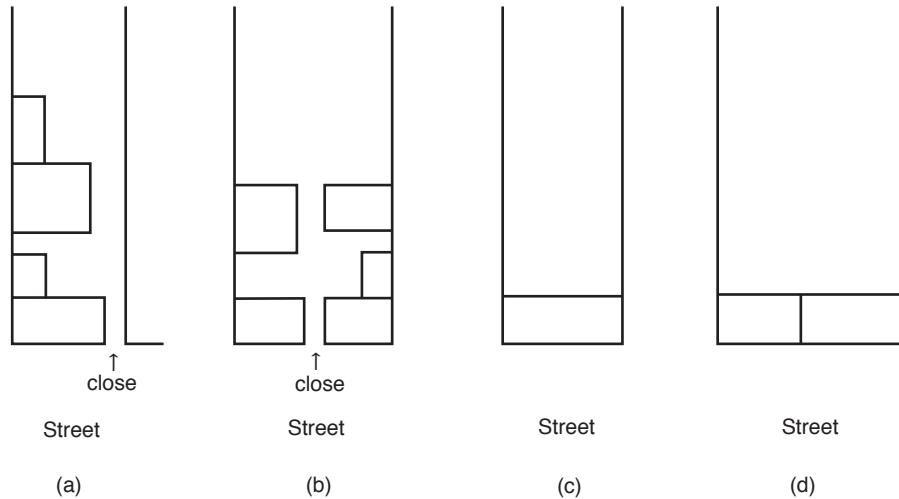
provided by the National Library of Scotland (NLS). Displaying the results as histograms allows a fuller assessment to be made of the plot pattern in each street block, including the plots thought previously not to fit into the quarter scheme.

- (b) To study the quarter-plot scheme in more detail. For this, the St Andrews and Perth results were augmented by data from a similar, unpublished cartographic study of the Burgh of Canongate, and by published data on the Edinburgh burgage plots (Tait 2006; Tait 2008).
- (c) To investigate the nature of the larger quarter-width groupings.
- (d) To seek evidence as to how the plots were set out and what units of measurement, if any, were employed.

MEASUREMENT OF PLOT WIDTHS

It was found that, with few exceptions, the backlands of the plots in both Edinburgh and Canongate were accessed by closes which passed along the full length of the plot. Many of these were still present when the OS First Edition survey was performed between 1849 and 1853, as indeed many are today. Access was of two types. In some cases plots had their own close, normally located along one boundary line (illus 1a). For simplicity these are referred to as single plots. In the remainder, a pair of plots shared a close situated at their mutual boundary (illus 1b). In this case only the overall width of the pair of plots could be determined, as their mutual boundary was obscured by the close itself. In Edinburgh, powerful support for the validity and consistency of these access patterns is supplied by the descriptive detail contained in the record of a burgh survey performed in 1635 for tax purposes (Edinburgh City Archive).

The scheme for access to backlands by individual and shared closes (illus 1a & 1b) is found frequently in Canongate and Perth but



ILLUS 1 Plot layout: (a) a close providing backland access to a single plot, (b) providing shared access to a pair of plots, (c) a single plot with no close access, and (d) a plot with no close access fronted by two foreland buildings each also conforming to the quarter-plot scheme

less so in St Andrews, where it was noted that the foreland buildings often occupy the whole frontage (illus 1c). Sometimes two foreland buildings, each complying with the quarter-plot scheme, occupy the frontage between two backland plot boundaries which also comply (illus 1d). The apparent absence of a need for an access close may well be related to the relative lack of backland building development in St Andrews.

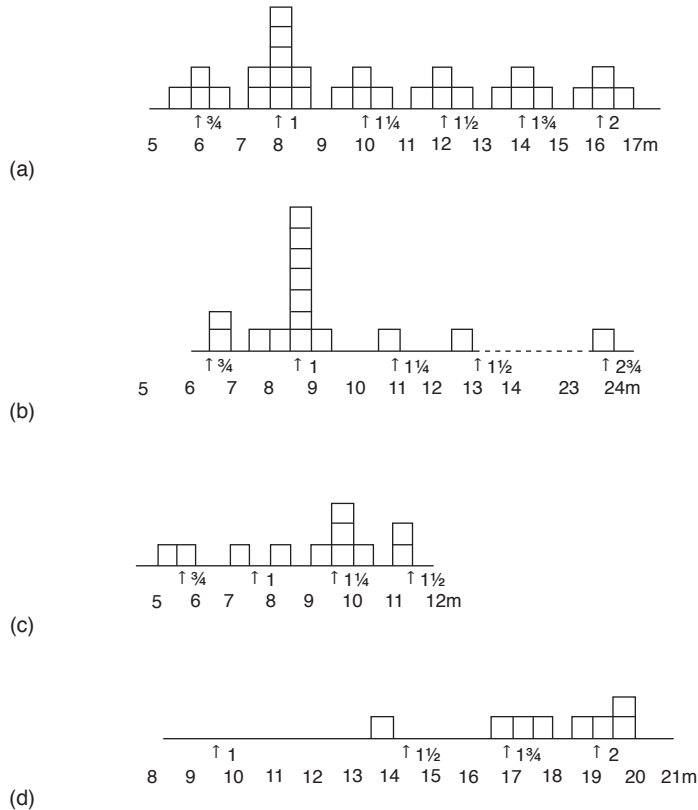
In the first published study of the Edinburgh plots, the plot widths were measured in the vicinity of the back of the foreland buildings by determining the positions of the plot boundaries from backland features, mainly building and boundary walls (Tait 2006: 300). However, not many sections of boundary of sufficient length could be identified in the western section of the street between St Giles' and the Castle Esplanade because of later development activities.

It was possible, however, to determine boundary positions in this part of the street simply using foreland features such as house end walls, pend sides and frontage features. This

technique was used in the later, more detailed study of the west part of the street by a repeat of the earlier study using foreland features rather than boundary lines. The results were almost identical (Tait 2008: 46–7). This alternative technique has been used in the results reported here.

THE QUARTER-PLOT SCHEME

The plot widths in all four burghs studied were found to conform to the quarter-plot scheme. Spearman (1988: 57) displayed his results in tabular form, but a better understanding can be obtained by displaying them as histograms. In a histogram each plot in a street block or sector is represented by a square. Illus 2a shows, in simplified form, how the results are presented. The squares concentrate in groups or 'peaks'. The peak at 8m, containing nine plots, is the largest. This represents the unit plot width and corresponds to Spearman's modal width (Spearman 1988: 57). The other peaks are at



ILLUS 2 Examples of the quarter plot scheme: (a) idealised, with a unit plot width of 8m, (b) St Andrews, street block 2, (c) St Andrews, street block 14, and (d) Canongate SW sector

6m, 10m, 12m and so on (that is, at intervals of a quarter of the unit width). This is a basic example of the quarter-plot scheme as described in the earlier studies. The 6m, 8m and 10m peaks correspond to single plots (illus 1a), while the 12m peak contains a pair of 6m plots with shared access (illus 1b), the 14m peak contains a 6m and an 8m plot, and so on. (The observed pattern could equally well be described in terms of the quarter-width of 2m, with peaks at three, four, five quarters and so on.)

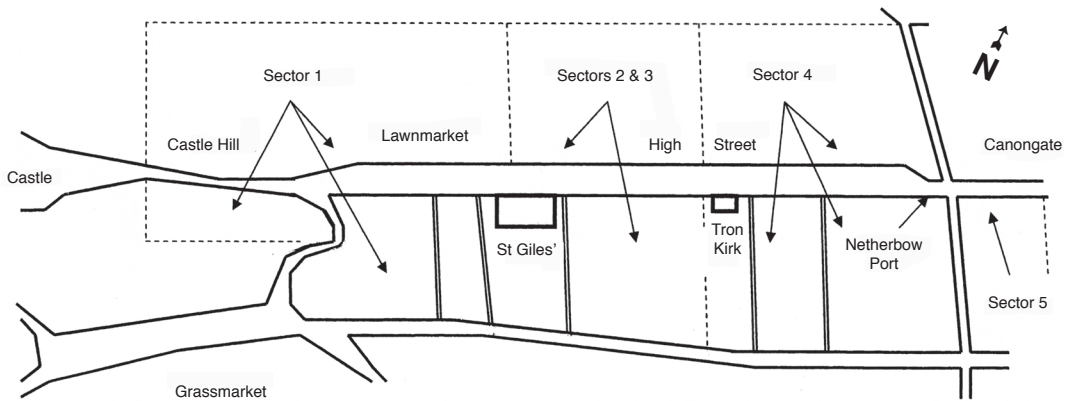
There is a spread of plot widths within each peak. This is not unexpected. A number of factors will have contributed to the spread. These include inaccuracies in laying out the plots in the first place and subsequent shifts

in the boundaries despite the efforts of the official Liners who supervised such matters. There will also be inaccuracies in the OS map survey process and in engraving the maps, subsequent non-uniform distortion of the map during printing and storage and further possible distortion during the NLS digitisation process. Plots having widths on the extreme fringes of a peak may explain the reported presence of plots that apparently did not fit into the scheme (Brooks & Whittington 1977: 57).

In practice, the peaks derived for different street blocks or sectors in a burgh are found to be of greatly varying sizes, and less regular in appearance than those in the simple example of illus 2a. Illus 2b, for a St Andrews street block, shows 10 out of 15 plots in the unit peak. The others

are associated with four other quarter-widths. However, the unit peak is not always the largest. Illus 2c, for another St Andrews street block, provides a good example in which the one and a quarter peak contains the greatest number of plots. In another example, this time from Canongate, there are no single plots, only pairs of plots, 1 1/2, 1 3/4 and 2 units wide (illus 2d). The results from each of these three examples provide supportive but not convincing evidence for the quarter-plot scheme. With the 49 street blocks or sectors studied in this report it is fair to claim that the accumulated evidence is indeed convincing.

The unit plot widths are calculated by an averaging process. Statistical analysis suggests



ILLUS 3 Plan of Edinburgh indicating the five street sectors. Sector 5 (beyond the Netherbow Port), although in Canongate, is part of the burgh of Edinburgh.

that the unit plot values quoted will mostly be no more than about 0.15m above or below the ideal result in 68% of cases and no more than 0.3m from it in 95% of cases. This consideration becomes important in making a decision as to whether two street blocks can be taken to have 'the same' unit width or not, as will be discussed in presenting the results for the four burghs.

There are also factors which may produce discrepancies between results taken from different sheets of map or from maps of different burghs. Confidence that these differences are small, at least between sheets covering one town, is provided in particular from the relative coherence of the measurements made for Edinburgh and Canongate which cross continuously between sheets 30 and 36, and 35 and 36 of the Edinburgh OS Map.

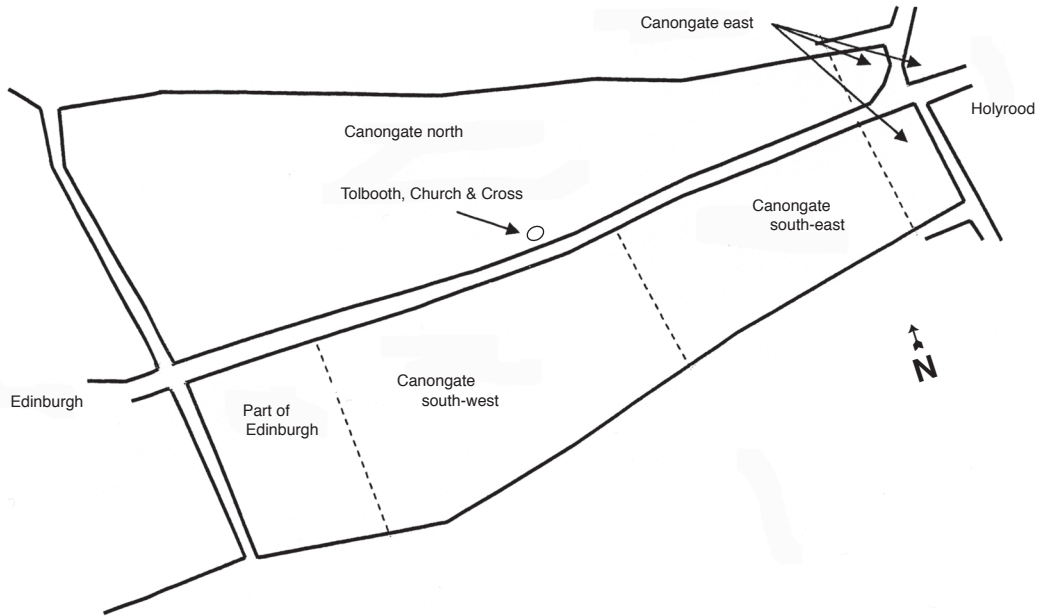
Unit widths are listed in the Appendix for all four burghs under discussion. The tables also report which peaks contain the largest number of plots.

EDINBURGH PLOTS

The main street in Edinburgh is located on a ridge of land that descends gently eastwards

from the Castle Esplanade to St Giles' and onward to the main east entrance to the burgh at the Netherbow Port. The burgage plots on either side of the street slope steeply down to low ground on the north and south. Beyond the burgh to the east is the burgh of Canongate, although a section on the south side of the street was part of the burgh of Edinburgh (illus 4). The unit plot widths listed in the Appendix are based on the measurements in the previously published studies (Tait 2006: 303; Tait 2008: 47). The closeness of the unit widths for sectors 2–5 is unlikely to be fortuitous – they are equal within the $\pm 0.15\text{m}$ quoted earlier and this in its turn provides some support for the statistical accuracy presently claimed. Sector 1 has a smaller unit width.

The placing of two unit widths in the same group does not necessarily imply that layout was contemporary. On the other hand, a change in unit width between two adjacent street blocks or sectors may possibly indicate the converse, particularly when it is found to occur at a point where there was a simultaneous change in direction of the street frontage. This was encountered at the transition between sector 1 and sector 2 on the north side of the street (Tait 2008: 49). It has been suggested that the burgh



ILLUS 4 Plan of Canongate indicating the four street sectors

developed eastwards from the Castle towards St Giles' (Dennison 2005a: 262). The transition may thus indicate the start of a new phase of development eastwards from there.

CANONGATE PLOTS

The main street of Canongate extends eastwards beyond Edinburgh's Netherbow Port, terminating at the entrance to Holyrood Abbey (illus 4). The burgh's tolbooth, church and mercat cross are located approximately halfway down the street. The development of the burgh of Canongate has been discussed in two recent books (Dennison 2005b; Holyrood Archaeology Project Team 2008).

Plot width measurements were made in four sectors covering a large proportion of Canongate (see Appendix). Three of these sectors were set out to the same unit length within the statistical limits discussed earlier. Of them, the east sector

contains a number of foreland buildings lacking significant backlands but still conforming to the quarter-plot scheme. Similar cases are to be found in St Andrews and Perth. The fourth sector, the south-east sector, is the same width as four of the Edinburgh sectors. This sector overlaps the site of the new Scottish Parliament building. The Holyrood Archaeology Project Team excavated an extensive area within the sector and report evidence of early plot boundaries there (Holyrood Archaeology Project Team 2008: 17–32). It will be of interest to compare these boundary positions with those determined in the present study.

SAINT ANDREWS PLOTS

The burgh of Saint Andrews developed along three streets which slowly converge towards their east ends. There are a number of north/south interconnections. Brooks and Whittington



ILLUS 5 Plan of St Andrews indicating the 22 street blocks. Original figure by RM Spearman from *The Scottish Medieval Town* by Lynch Spearman and Stell 1988. Reproduced courtesy of John Donald, an imprint of Birlinn Ltd

provide a full description of the burgh and its location (Brooks and Whittington 1977). The relatively complex street pattern is accompanied by a correspondingly large number of street blocks. Illus 5 indicates the presence of 22 such street blocks (Brooks and Whittington 1977: 283). The results in descending order of width are displayed in the Appendix. Street block 1 has easily the largest unit width encountered in this study. The unit widths again fall into groups, as indicated, but these are not always well separated, so they have to be viewed with caution due to the statistical uncertainties involved. They may still be helpful as an aid to interpretation if used in association with other evidence.

One notable feature is the closeness of the unit widths for street blocks 2 and 2a. The latter is located beyond the burgh boundary to the east, within the property of the Priory (ibid: 285). The question arises as to whether block 2a was laid out at the same time as block 2. There is clear documentary evidence that street block 2 was part of the early phase of burgh development, along with blocks 1 and 3 (ibid: 290).

PERTH PLOTS

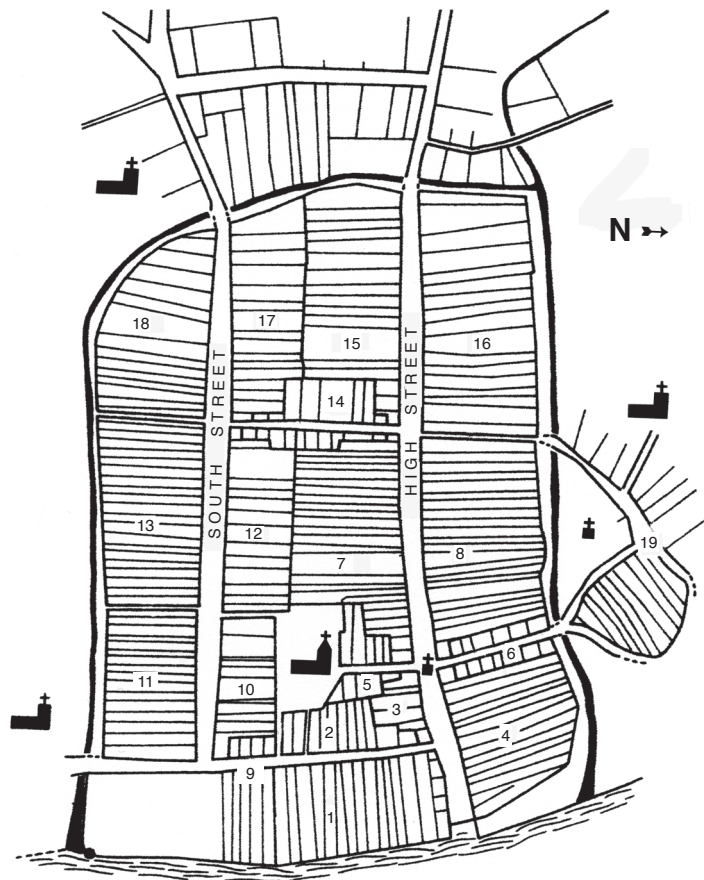
The street layout in Perth has two major east/west streets, again with north/south interconnections (illus 6). The 19 street blocks are marked with the

original numbering scheme used by Spearman (1988: 57). Results are listed in the Appendix and there are the usual provisos about interpretation.

Another aspect of the quarter-plot scheme is evident in one street block in Perth. There is a local concentration of narrow plots at the west end of street block 7. Similar concentrations were found at St Andrews in parts of street blocks 3 and 5 and in Canongate at the west end of north side of the street. These concentrations may perhaps be explained in

terms of changing economic conditions or social requirements.

The plot width scheme as measured and interpreted here is fully consistent with the earlier findings of Spearman (1988), and indeed the plot boundaries selected in Perth were almost identical to those displayed in the working records of that study. The development of the burgh of Perth, including the results of recent archaeological studies, has been reviewed recently (Bowler 2004).



ILLUS 6 Plan of Perth indicating the 19 street blocks. Original figure including street block numbers by NP Brooks and G Whittington in *Transactions of the Institute of British Geographers* Volume 2, 1977. Reproduced courtesy of the Royal Geographic Society (with the Institute of British Geographers)

PLOT ACCESS AND THE QUARTER-PLOT SCHEME

In Edinburgh and Canongate, with very few exceptions, $\frac{3}{4}$, 1 and $1\frac{1}{4}$ width plots are single plots as in *illus 1a*, and furthermore the close is located on the east side of the plot. The high degree of conformity to this rule might suggest that control had been exercised over the positioning of the access paths.

The pairs of plots that are $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$ and $2\frac{1}{2}$ units wide have shared access (*illus 1b*). Again, with few exceptions, the close is found to be located such as to provide a division into two plots which also conform to the quarter-plot scheme: a $1\frac{1}{2}$ width pair into two $\frac{3}{4}$ unit plots, a $1\frac{3}{4}$ width pair into a $\frac{3}{4}$ and a 1 unit plot and so on. Widths of more than $2\frac{1}{2}$ units are infrequent and usually appear to be associated with relatively modern developments.

In Perth, the single plot access is on the east side of the plot other than in street blocks 4 and 8 where it is on the west. In street block 1 it is on the south and in street block 2 on the north, the street in those cases running north to south. However, a significant number of plots have no access (*illus 1c*). In St Andrews, relatively few single plots have an associated close. However, when a close is present, it is on the east side. In St Andrews and Perth the plot pairs normally conform to the scheme encountered in Edinburgh and Canongate.

The access scheme is not entirely consistent however. Occasional 1 and $1\frac{1}{4}$ width plots are encountered that are accessed approximately centrally, while the plot pairs are in a few cases subdivided in 'incorrect proportion' by the close, or even have no access.

The question arises as to whether plots having shared access were laid out as pairs of plots as is inferred by the terminology used here, or were large single plots that were subsequently divided. Subdivision is extensively encountered in England (Pallister, Slater & Dennison 2000: 120). If in fact plots with shared access (or any other plots) were formed by subdivision, these

measurements suggest that the process must have been undertaken with care and precision.

Conzen, in his paper on Alnwick, suggested the possibility that the plots had been laid out initially to uniform width and had been modified later by exchange of quarter-width strips between neighbours, thus producing the quarter-plot scheme (Conzen 1960: 32). The exchange of a quarter strip of land between owners of a pair of adjacent unit plots would lead to the creation of a $\frac{3}{4}$ and a $1\frac{1}{4}$ width plot. Archaeology might in some circumstances detect supporting evidence of such a transfer – evidence of parallel boundary displacements by a quarter of a plot width.

There are two problems with this interpretation in the four Scottish burghs under discussion here. Firstly, there are great discrepancies between the numbers of $\frac{3}{4}$ and a $1\frac{1}{4}$ width plots within the street blocks and sectors. Secondly, it is not unusual to encounter a single $\frac{3}{4}$ width plot having several standard plots on either side – a situation which is difficult to explain in terms of quarter-plot exchange.

It seems much more likely that the plots in Scotland were set out to the quarter-plot scheme in the first place. It is not difficult to see why such an arrangement might be in place. Newly formed burghs would naturally be keen to attract experienced merchants with good national or international contacts to become burgesses. Such newcomers were likely to have real potential to contribute to the economic development of the burgh. They might well be offered a large land plot by way of inducement to settle in the burgh. In St Andrews, Maynard the Fleming, burgh of Berwick, moved to St Andrews where he assisted in the setting up of the new burgh, became the first provost (*praefectus*) and was awarded three tofts on the south side of what is now South Street (Brooks & Whittington 1977: 290; Lawrie 1905: clxix). These were in street block 1 which is notable for its unusually large plot widths. Maynard's land rent was to be 4 pence per plot – the fact that this was specified might perhaps suggest that plot rental values varied from site to site within the burgh. Larger

size plots allocated to favoured incomers are not unknown in England (Pallister, Slater & Dennison 2000: 172).

The simplicity and clarity of the present plot patterns, the consistency observed between foreland and backland boundary positions and the systematic positioning of the access closes are notable. The situation in England tends to be more complex. The pattern presented by the foreland buildings frequently requires careful interpretation in order to relate it to the original plot boundaries (Slater 1990: 71–2).

Scottish urban development certainly absorbed influences from other European countries, England in particular. The degree of sophistication of the system under which Scottish burghs conducted their affairs has been discussed by Pat Dennison (Dennison 1998: 101–2). At the same time, there were clear differences between Scottish burghs and English boroughs in terms of, for example, overlordship, land holding, church organisation, tax policy and occupational structure (Lynch Spearman & Stell 1988: 11–3). The present observations appear to be in line with both these themes.

PLOT WIDTHS AND MEASURING UNITS

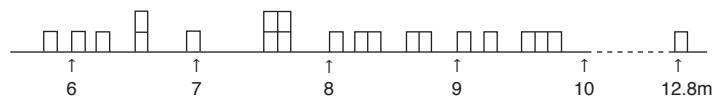
It is of interest to search for evidence as to what measurement units were used in setting out the plots. There is written evidence of the inch, defined in terms of thumb width or grain length, being in use in England as early as the ninth century (Connor & Simpson 2004: 36). A foot of twelve inches was also used in England. Early in the reign of Henry I (1100–1135) a standard yard was introduced, the inch now being defined as one-thirty-sixth, and the foot as one-third of this (Connor 1987: 83). There were documentary references to ‘the iron yard of our lord the king’ from the end of the 12th century onwards (Connor 1987: 89–91). Such standards will have

provided a greatly improved system for length measurement. In England the perch, normally 16.5ft long, was used as a basis for plot layout. Plots of width varying from 2 perches up to as much as 8 perches – very much wider than normally encountered in Scotland – are reported (Slater 1990: 71–4; Pallister, Slater & Dennison: 170–2).

In Scotland the early compilations of burgh law known as the *Leges Burgorum*, which were thought likely to originate from the reign of William I (1165–1214) or perhaps somewhat later, provide early definitions of the Scottish units of length (MacQueen & Windram 1988: 209–10). The Scots ell is defined to be 37 inches in length, one inch being defined in the same way as in England (Connor & Simpson 2004: 23). Ell standards were in common use in later times but none have survived in Scotland from before 1500 (Connor & Simpson 2004: 420–5).

Scotland certainly used the foot, and indeed several early records have survived in which feet are used in describing plot dimensions. Two, dating from 1153 × 1162 and 1212 × 1214 refer to plots in Perth (Barrow 1960: 216; Barrow 1971: 471–2). In another, a fragment of a document of early date, it is specified that the fall, normally defined as six ells or 18½ft in length, should be 20ft in length within burghs (Connor & Simpson 2004: 86). Without official standards, these measures would have been of variable length. In the early stages of burgh plot layout there is no evidence that any such standards were available.

In the absence of further evidence, possible candidates for plot layout in Scotland are the foot (0.304m), the ell (0.94m), the fall (5.64m or 6.10m) or perhaps, adopting English practice, the perch (5.03m). The results of the 49 unit



ILLUS 7 Average widths for all the groups of plots as indicated in the Appendix

widths from the four burghs, as listed in the Appendix, fall naturally into 21 groups sharing a similar widths. These are displayed in illus 7. They are seen to be relatively evenly spread over a broad range of widths. Certainly there is no evidence for the use of the fall or the English perch as a basis for layout. Even the use of the ell or yard would tend to produce a clustering of widths at regular intervals. Such clustering is not in evidence. This leaves the foot as the most likely unit. However, this would be too small to be detectable within the limitations of the present study, particularly in situations where accurate length standards had not been available.

It is known that ropes were used in land measurement (Connor & Simpson 2004: 85). Plots could have been accurately laid out to the quarter-plot scheme using a rope of unit length marked off at quarter unit intervals. Alternatively, a rod or rope of quarter unit length could be used. A formal system of measurement is not needed in the preparation of such devices however. Suitable lengths could simply be selected by experience, knowing approximately the width of plots appropriate for the site being set out. Such a procedure would account well for the observed profusion of unit plot widths encountered in this study.

SUMMARY

In each street block or sector, the plots all conform to the quarter-plot scheme in which plots of the unit width, usually the most numerous, are accompanied by others differing in width by quarters of this unit. The proportion of plots in different quarter groupings varies greatly from one street block or sector to another. Plots facing into thoroughfares and having little

or no backland also conform to the quarter-plot scheme.

Evidence suggests that the plots within a street block or sector may well have been laid out in the first place to the quarter-plot scheme, rather than to equal width with subsequent exchange of quarter-width strips to produce the observed configuration.

The unit plot widths in the four burghs studied vary greatly, the smallest being 5.8m and the largest being 12.8m. The foot is the most likely unit of measurement to have been employed, but it is pointed out that an accurate quarter-plot scheme could in any case be laid out without the use of a formal measuring scale.

The consistency in the positions of plot boundaries and of the access closes to the plots suggests that a continuing system of control of such matters was exercised.

Continued study of burgage plot patterns has the potential to make a positive contribution to the understanding of Scottish burgh development, particularly in burghs having a relatively simple layout, when considered in combination with archaeological, architectural and historical evidence. The presence in each street block of the quarter-plot scheme adds complexity however, while the limitations set by statistics demand caution in interpretation.

ACKNOWLEDGEMENTS

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APPENDIX

Tables 1–4 provide unit plot widths for Edinburgh, Canongate, St Andrews and Perth respectively. In each table, plots are listed in decreasing order of width and placed in groups. Average widths are given for each such group. Most frequently encountered plot sizes are also indicated.

In Edinburgh, the boundary between sectors 1 and 2 is at Byer's Close. In Canongate, the boundary between the east and south-east sectors is to the east of Thomson's Close and that between the south-east and south-west sectors is to the east of Bull's Close.

TABLE 1

<i>Sector</i>	<i>Unit plot width</i>	<i>Most frequent plot widths</i>	<i>Group and average width</i>
Edinburgh 2 and 3	7.74m	1	
Edinburgh 4	7.63m	1¼	
Edinburgh 5	7.62m	1	7.66m
Edinburgh 1	6.54m	1	6.54m

TABLE 2

<i>Sector</i>	<i>Unit plot width</i>	<i>Most frequent plot widths</i>	<i>Group and average width</i>
Canongate SW	9.64m	2	
Canongate E	9.52m	1½	
Canongate N	9.49m	¾	9.55m
Canongate SE	7.66m	2	7.66m

TABLE 3

<i>Street block</i>	<i>Unit plot width</i>	<i>Most frequent plot widths (units)</i>	<i>Group and average widths (units)</i>
St Andrews 1	12.80m	$\frac{3}{4}$, $1\frac{1}{4}$	12.80m
St Andrews 22	9.77m	$\frac{3}{4}$	9.77m
St Andrews 10	9.14m	1	
St Andrews 12	9.03m	1	
St Andrews 11	8.91m	1	
St Andrews 13	8.90m	1	9.00m
St Andrews 2a	8.72m	1	
St Andrews 2	8.65m	1	
St Andrews 5n	8.62m	1	
St Andrews 16	8.61m	$1\frac{3}{4}$	
St Andrews 15	8.51m	1	8.62m
St Andrews 9	8.36m	1	
St Andrews 20	8.33m	1	
St Andrews 17	8.31m	$\frac{3}{4}$	
St Andrews 7	8.30m	1	8.33m
St Andrews 8	8.11m	1	
St Andrews 3	8.01m	1, $1\frac{1}{4}$	
St Andrews 6	7.99m	$\frac{3}{4}$, $1\frac{1}{4}$	
St Andrews 21	7.93m	1	8.01m
St Andrews 19	7.62m	$1\frac{1}{2}$	
St Andrews 14	7.60m	$1\frac{1}{4}$	
St Andrews 18	7.56m	1	
St Andrews 5s	7.50m	$1\frac{1}{4}$, $1\frac{1}{2}$	7.57m
St Andrews 4	6.02m	$1\frac{1}{4}$	6.02m

TABLE 4

<i>Street block</i>	<i>Unit plot width</i>	<i>Most frequent plot</i>	<i>Group and average widths (units)</i>
Perth 14	9.63m	1	9.63m
Perth 1/9e	9.23m	1	9.23m
Perth 12	8.77m	$\frac{3}{4}$, 1	8.77m
Perth 11	8.76m	$\frac{3}{4}$	
Perth 16	8.28m	1	
Perth 2	8.19m	1	
Perth 8	8.13m	$1\frac{1}{4}$	
Perth 3	8.07m	1	8.17m
Perth 6	7.68m	$1\frac{1}{4}$, $1\frac{1}{2}$	
Perth 19	7.48m	$\frac{3}{4}$, 1	7.58m
Perth 4	7.09m	1	
Perth 15	6.88m	$1\frac{1}{4}$	
Perth 9w	6.79m	1	6.92m
Perth 13	6.57m	$\frac{3}{4}$, 1	
Perth 17	6.50m	1	6.54m
Perth 10	6.19m	1	6.19m
Perth 7	5.90m	1	
Perth 18	5.76m	1	5.83m

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