

# The Stable of Halkerston Lodge and Moray House

Roof Architecture of the 1630's Around Edinburgh

Thorsten Hanke

*Thorsten Hanke is an architect and building archaeologist. His research focuses on historic building technology and its impact on architectural design.*

Halkerston Lodge (Inveresk) and Moray House (Edinburgh) are prominent examples of seventeenth century domestic architecture of Southeast Scotland. Scottish architecture of this time has been subject to academic research but these works of scholarship usually neglect the close analysis of structural features.<sup>1</sup> It is, however, a promising approach to base architectural research on the assessment and analysis of original roof structures rather than just on written original documents, on drawings or on formal analysis. The dendrochronological research of construction timbers allows in ideal cases the precise assessment of their origin and date of erection, and thus provides an invaluable tool in clarifying architectural history. This paper consequently focuses on the analysis of the roofs over the Stable of Halkerston Lodge and over Moray House. It will depict an abundantly employed seventeenth century roof feature in the region around Edinburgh and also undertake an attempt to provide a clue to the architectural demands leading to this construction pattern and to its generic development.

The year 1603 marks a crucial change in the relationship between Scotland and England. Scotland, for the first time since 1314, is being governed from London, but unlike in the early fourteenth century the king is not of English origin but belongs to the Scottish house of Stewart. The union of the crown between the royal courts of England and Scotland terminates the almost permanent hostility between the two countries and seals a period of peace unknown for more than three hundred years. The stable political situation of early seventeenth century Scotland offers favourable conditions to patrons and practising architects<sup>2</sup> and provides the framework crucial to the implementation of high profile architecture.

The comparison of the work of Scottish architects practising in this period to those practising in the preceding centuries reveals two significant changes. The first is that prominent Scottish seventeenth century architects are not being employed primarily on royal building sites as was the case until into the sixteenth century, but are increasingly commissioned by burgesses, merchants or members of the landed classes.<sup>3</sup> And the second important change refers to the size of the buildings. The architecture of early seventeenth century Scotland does not reach the palatial scale of the royal architecture executed on the fifteenth and sixteenth century building sites of Edinburgh Castle, Stirling Castle, Falkland Palace, Linlithgow Palace or Holyrood Palace and almost never exceeds the scale of country seats, tolbooths, relatively modest churches or townhouses.<sup>4</sup>

These changes, which indirectly reveal the financial possibilities of contemporary non-royal patrons<sup>5</sup>, indicate that the Scottish society sees in this time the emergence of an increasingly broad civic or noble class and also the formation of an architectural profession which is independent of royal patronage. This influential class formulates its own building demands according to the prevailing architectural fashion. The prevalent architectural topic in Scotland during these years is not the castle or the fortified tower house, as used to be the case in the preceding century, but the villa, the town house and the country seat.<sup>6</sup> Halkerston Lodge and Moray House represent this high profile domestic architecture in a characteristic way. Both buildings are of moderate scale but comprise carefully designed interior spaces meant to express the taste and the culture of the owners.

Halkerston Lodge was erected between 1638 and 1642 for the Edinburgh merchant John Ryndt.<sup>7</sup> Its pyramidal roof provides an interesting example of seventeenth century Scottish roof design, but it is an important exception<sup>8</sup> rather than a typical feature. This, however, covers the adjacent stable, which thus may serve as an appropriate case study to depict the basic feature used by Scottish wrights around 1630. This roof type can be found in almost identical shape over much larger and much more important contemporary buildings such as Heriot's Hospital (Edinburgh) or Pinkie House (Musselburgh) and also over earlier structures like Alloa Tower (1497 or older) or Musselburgh Tolbooth (1570s or 1590s). Even Gifford Parish Church, finished in 1710 by James Smith, still employs this feature. Burnet publishes a town plan of Inveresk, which sees the erection date of Halkerston Lodge Stable later than that of the main building.<sup>9</sup> The stable, however, shows no stylistic commonality with classical buildings and thus certainly belongs to the period under consideration.<sup>10</sup>

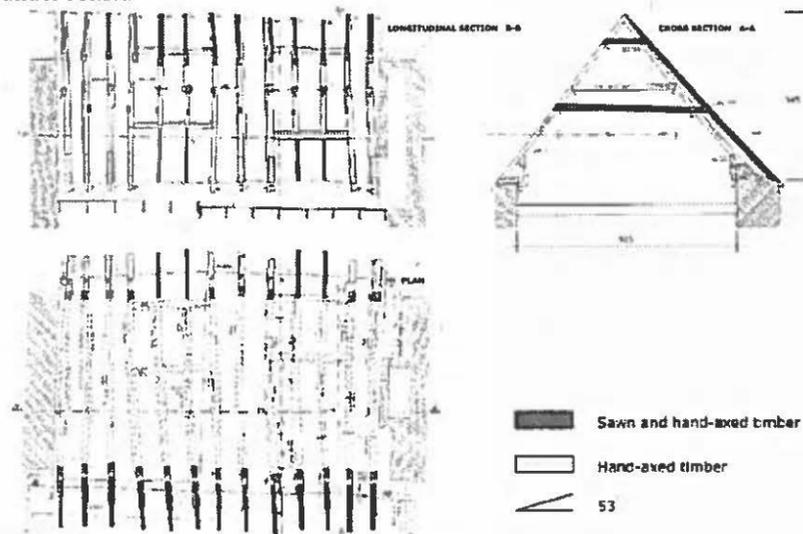


Plate 1  
The Stable of Halkerston Lodge, Inveresk:  
South view and roof plan.

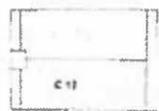


Plate 2  
The roof of the stable of Halkerston Lodge,  
Inveresk: Plan, cross-section, longitudinal  
section.

Halkerston Lodge Stable presents itself as a crowstepped one-storey rectangle, covered by a slate roof spanning a width of 4.15 m and rising in a pitch of 53°. Its roof, which was erected in two independent building stages<sup>11</sup>, is a simple common rafter construction<sup>12</sup> using timbers of almost uniform dimensions. Typical for the time are the "Scottish" rafter foot (consisting of sole-piece and ashlar post), the lack of tension taking members, the marking of the timbers with scratched Roman numbers and the usage of sarking boards to provide lengthwise stiffening. Typical also is the use of pine or fir, the usage of wooden pegs, handmade iron nails and the (partly) hand-axed surface<sup>13</sup> of the timbers.

Roofs showing these characteristics are also to be found over Moray House, Edinburgh, a townhouse erected about 1630 as the Edinburgh residence of the Countess of Home. Moray House presents itself today as an assemblage of different buildings dating from the early seventeenth, eighteenth and early twentieth century.<sup>14</sup>

In the context of this discussion we are focusing only on the original seventeenth century structure which was erected on an L-shaped plan. Its most impressive features are two lavishly ornamented plaster ceilings under the typical steeply-pitched slate-roof. The roof construction over the north range fits perfectly into the Halkerston Stable scheme. This roof is interesting because it illustrates the architectural demands which might have led to the adoption of trusses of uniform shape as the principal element of Southeast Scottish seventeenth-century roof design.

This construction pattern must be linked to a changing fashion in the design of interior spaces in late sixteenth and early seventeenth century Scotland. The architectural showpieces of Scotland during this period no longer express the "Great Hall" of the Middle Ages but emphasise elaborately proportioned libraries, drawing rooms and dining rooms which were covered with either timber or plaster ceilings.<sup>15</sup> This purely cultural development has implications on construction issues. Plaster and timber ceilings require a sound substructure, which can easily be provided by narrowly spaced rafters, collar beams and ashlar posts. The roofs visible over Moray House and Halkerston Lodge Stable are thus by no means primitive but meet the structural demands imposed by the adoption of plaster and painted timber ceilings.<sup>16</sup>

To understand the ubiquity of these roofs it is also important to see that the structural problems incurred by most Scottish roofs of this period were a *quantité négligeable*. The vanishing of the "Great Hall" relieved the architect from the need to span particularly wide spaces. He easily could refrain from the use of trestle constructions.

It is an interesting question whether the uniformity of Southeast Scottish seventeenth-century roofs finds an explanation not only in these cultural reasons but also in poor or inaccessible resources of timber, hence in the specific conditions of post-medieval Scotland. The floating of Highland timber was common practice in the eighteenth and nineteenth century<sup>17</sup> but timber floating seems to be unknown in the sixteenth and seventeenth centuries. Timbers used in the region around Edinburgh either originated from local forests<sup>18</sup> or were shipped from North and Central Scotland, Scandinavia, France or Prussia.<sup>19</sup> Timber thus could be moved only by wagon and ox or by ship. Foreign and Highland timber could only have had dimensions dictated by the size of cargo ships respectively by the particular problems caused by non-nautical transport methods. Interesting in this context is an original record quoted by Anderson<sup>20</sup> which is related to the cargo of a Norwegian merchant ship. The author mentions "(...) 400 deals, 200 roof spars, 300 small spars, 400 girthstings, 50 rafters with some burnwood and wainscot."<sup>21</sup> It is conceivable that wrights of early seventeenth century Southeast Scotland relied on a restricted choice of timber and primarily used pre-fabricated elements.

The west wing of Moray House possesses another type of roof which also belongs to the first building stage. The structural composition of this feature must be taken as a phenomenon of major significance.<sup>22</sup> This roof belongs to the family of scissor-braced trusses, to be found in Scotland only over nave and choir of Glasgow Cathedral (second half of the thirteenth century) and over the refectory of Ardoch Priory (probably fifteenth century). The highly elaborate plaster ceiling of Moray House, constructed around 1630, is covered by a roof which represents the technical knowledge of the late thirteenth century.

According to Fawcett, these roofs were *probably* common in Scotland until the end of the Middle Ages.<sup>23</sup> The roof over the west range of Moray House



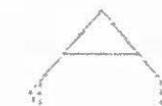
Plate 3  
Moray House, Edinburgh: Northwest view  
and roof plan.



Plate 4  
Moray House, Edinburgh: The plaster ceiling  
over the Balcony Room.



Plate 5  
Moray House, Edinburgh: A-shaped truss  
over the North Range.



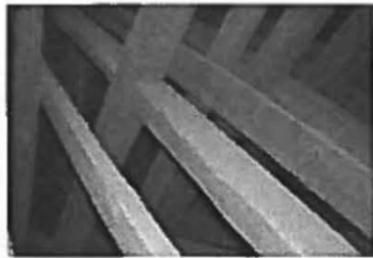


Plate 6  
Moray House, Edinburgh: Scissor-braced  
truss over the West Range.



strongly suggests that its wright had a sound knowledge of this medieval construction technique. This feature therefore allows two conclusions: first, Fawcett's tentative statement is probably correct and second, the medieval scissor-braced common rafter roof is in all probability the source for the principal Scottish seventeenth century roof feature, to be found over the north range of Moray House and over the stable of Halkerston Lodge.

This feature has nothing in common with the majority of all published Scottish roofs.<sup>24</sup> Its importance is not due to its structural composition, this indeed being nothing more than the repetition of plain A-shaped trusses, but to its ubiquity in post-medieval Lothian and Fife. In the course of the sixteenth century common rafter roofs almost totally superseded a highly distinctive, very "British" construction pattern<sup>25</sup>, regardless of the fact that these roofs must have been known to Scottish seventeenth century wrights and architects. Roofs like that over the stable of Halkerston Lodge (or over Pinkie House, Heriots Hospital, Alloa Tower, Musselburgh Tolbooth, etc., to mention prominent buildings of larger dimensions) show no resemblance to these native Scottish examples found for instance over the Great Halls of Darnaway Castle (1387), Edinburgh Castle (c.1500), Stirling Castle (c.1500) or over the Residence of the Knight's Hospitallers, Linlithgow (presumably late Middle Ages)<sup>26</sup>, but seem to be considerably more akin to Scottish, English, French or German common rafter roofs of the late 13<sup>th</sup> century.<sup>27</sup>

The simple repetition of uniform trusses, without the use of purlins, struts or king-posts, is remarkable in the light of the British tradition of trestle-based roof construction. This obviously retrograde technical development, leading from highly individualistic to uniform and seemingly less sophisticated<sup>28</sup> solutions, raises intriguing questions. How did an (obviously) well-established construction technique almost totally disappear? Is the simplicity of the roof over Halkerston Lodge Stable a retrograde step? What conclusion allows the described phenomenon in respect to the architectural culture of early seventeenth century Scotland?

#### PICTURE CREDITS

All pictures by Thorsten Hanke. The roof plan in plate 3 uses information drafted from the archive of the RCHMS. See EDD/40/4 and EDD/40/13.

#### ACKNOWLEDGEMENTS

My thanks are warmly given to Mrs. Gilligan, Inveresk for her kind permission to analyse the roof of Halkerston Lodge Stable. I'm equally grateful to Mrs. Kate Dalgetty and Mr. John Williamson for their responsiveness when confronted with my desire to see the roofs of Moray House.

#### NOTES

- 1 Exceptions are Ruddock, T., 'Repair of two important early Scottish roof structures', in: *Proceedings of the Institution of Civil Engineers*, vol. 110, no. 3, pp. 296-307 and Gomme, A., 'Scottish hammerbeam roofs, and one that isn't', in: *Architectural Heritage XIII, The Journal of the Architectural Heritage Society of Scotland*, pp. 20-35
- 2 The term "architect" is used here as a synonym to the older term "master mason" which was used in Scotland during the Middle Ages and the Renaissance. Master mason was an official title held by those responsible for design and erection of buildings.
- 3 Although prominent sixteenth century craftsmen were occasionally commissioned by non-royal clients, they are chiefly mentioned in connection with the building campaigns of the Royal Court. This situation changes in the early seventeenth century. James Murray of Kilbabercon and William Wallace are the first prominent builders to become involved in important non-royal architectural projects. Robert Mylne and James Smith later establish successful firms and act as masons, designers, speculators and contractors. William Bruce and William Adam, finally, embody the type of the educated Gentlemen-Architect so typical for the architectural culture of post-medieval Britain. See for details Glendinning, MacInnes, MacKechnie (1996).
- 4 The only exception is Heriot's Hospital, Edinburgh.
- 5 MacKechnie links the favourable economic conditions of this time to the redistribution of wealth after the dissolution of the monasteries. See MacKechnie (1996), p. 31
- 6 Glendinning, MacInnes, MacKechnie (1996)
- 7 Ibid.
- 8 The only other contemporary Southeast Scottish building which uses a pyramidal roof is Preston Lodge, Cupar (begun probably after 1623). Remarkable in respect to Halkerston Lodge is not only the unusual shape of the roof but also the construction which employs purlins. Few contemporary buildings in Lothian and Fife use principal rafters. Two very important examples are Edinburgh Tron Church (1637-48) and Edinburgh Parliament House (1637-39). The roofs of these buildings deserve discussion in a separate essay.
- 9 Burnet (1999), p. 7
- 10 It is tempting to trace the origin and felling-date of the construction timbers by using dendrochronology, but it is highly unlikely to be successful in this particular case. Dendrochronological research reaches its borders when the samples do not contain a sufficiently high number of tree-ring. The scant dimension of the timbers to be found in this roof may cause a major difficulty.
- 11 Distinguishable by the treatment of the timbers which show either traces of hand-axing or traces of sawing and axing.
- 12 Terminology used according to Cordingley (1961)

- 13 Some timbers used in the Stable of Halkerston Lodge not only show traces of hand-axing but also traces of sawing. This raises the question whether the wrights used pre-fabricated material.
- 14 RCHMS, EDD/40/4
- 15 This development is also visible in the castles and palaces of the Stewarts. Stirling Castle and Edinburgh Castle still use their Great Halls as the principal architectural elements. Holyrood Palace already abandons this feature and puts more emphasis on private cabinets and chambers.
- 16 Pinkie House (c. 1613) is a prominent example which beautifully shows the connection between ceiling design and roof construction.
- 17 Timber floating down the river Spey is mentioned in a record dating from 8.6.1710 (see NAS GD44/43/3). Plenty of records point to Alexander Ludovick Grant who was heavily involved in the lumber business in the years after 1740 (see for instance NAS GD248/23/4 or NAS GD248/167/9).
- 18 Timbers used 1743 in Dalkeith Palace were taken from Dalkeith Forest. See NAS GD224/336/3
- 19 Plenty of references in Anderson (1967). See also Ditchburn (2000)
- 20 Unfortunately Anderson provides no further details on this source.
- 21 Ibid., p. 253
- 22 Only two other examples are currently known in Scotland. The roof over Moray House is not yet mentioned in literature on Scottish roofs.
- 23 Fawcett (2002)
- 24 Hay (1976), Stell (1996), Fawcett (2002), Gomme (2002). The only exception is Ruddock (1995). It is remarkable that the focus of Scottish scholarship on important early roof structures (especially on Darnaway Castle) obviously conveys a distorted picture of Scottish historic roof architecture.
- 25 Typology discussed in Smith (1958)
- 26 Published in McGibbon/Ross, demolished in late nineteenth century
- 27 In Scotland for instance the roofs over Glasgow Cathedral and over the refectory of Ardchattan Priory. For Scotland see Fawcett (2002). For Germany and France see Ostendorf (1908), for England see Hewett (1974). The only members which distinguish these roofs from that over Halkerston Lodge Stable are the scissor braces.
- 28 No emphasis on lengthwise stiffening for instance.