THE BRYGGEN PAPERS

Medieval Fires in Bergen – Revisited

Supplementary Series No. 6

FAGBOKFORLAGET

THE BRYGGEN PAPERS

Supplementary Series No 6

THE BRYGGEN PAPERS
give a scholarly presentation of the archaeological finds from the excavations at Bryggen and other medieval sites in Bergen.

The papers consist of two series, *the Main Series* and *the Supplementary Series*.

Published in the Main series

Vol 1 (1984) Asbjørn E. Herteig: The Archaeological Excavations at Bryggen. 'The German Wharf' in Bergen 1955–68. Arne Emil Christensen: Boat Finds from Bryggen.
Vol 2 (1988) Ingvild Øye: *Textile Equipment and its Working Environment, Bryggen in Bergen c 1150–1500.*
Vol 3 Part 1 (1990) Asbjørn E. Herteig: *The Buildings at Bryggen, their Topograhical and Chronological Development.*
Vol 3 Part 2 (1991) Asbjørn E. Herteig: *The Buildings at Bryggen, their Topograhical and Chronological Development.*
Vol 4 (1992) Arne J. Larsen: *Footwear from the Gullskoen Area of Bryggen.*

Published in the Supplementary Series

No 1 (1984) Studies on the earliest farm settlement, on the first builtup area along the shore, on animal hair products, coins, and seal jugs
No 2 (1988) Presentation of runic inscriptions found at Bryggen
No 3 (1988) Brewing, cordage products, sound tolls and music
No 4 (1989) The Bryggen Pottery 1
No 5 (1994) The Bryggen Pottery 2

THE BRYGGEN PAPERS

Supplementary Series No 6

Medieval fires in Bergen – revisited

FAGBOKFORLAGET

Printed in Norway by
PowerPrint AS

ISBN 82-7674-501-6

Typeset and cover design
by Fagbokforlaget

Published with a grant from
the Norwegian Research Council

Inquiries about this text can be directed to:
Fagbokforlaget
Fagerdalen 6
5035 BERGEN-SANDVIKEN
Tlf.: 47 55 33 35 00 Faks: 47 55 33 35 01
e-post: fagbokforlaget@fagbokforlaget.no
http://www.fagbokforlaget.no

Contents


Foreword

This is the first volume presented by the new editorial board of the Bryggen Papers. After the termination of the first Bryggen Project research on the medieval archaeology of Bergen is now being revitalised with several ongoing research projects. The new board wants to use the Supplementary Series for thematic presentations and discussions; we want to focus on themes not only from an archaeological point of view, but also to encourage interdisciplinary approaches. Our aim is twofold: to share the new research results on medieval Bergen with a wider international audience, and to stimulate methodological and theoretical debate.

Chronology is the backbone of archaeological studies. The unique situation in Bergen with doubly documented fires, in written sources as well as archaeological material, has formed the methodological framework for both relative and absolute chronology at Bryggen. The fire layers and the finds from these layers have been analysed and compared with written evidence. Lately, questions have been asked about the validity of this chronology, especially for the earliest periods. In the present volume of the Supplementary Series – 'Medieval fires in Bergen – revisited' – we want to scrutinise the new arguments more closely and to discuss their methodological and factual implications. The volume includes four articles on problems concerning the medieval fire-chronology of Bryggen and of Bergen in general.

The publication of this volume has been supported by a grant from the Norwegian Research Council.

The editorial board responsible for the publication of the series consists of Senior Executive Officer Ann Christensson, Directorate for Cultural Heritage, District Office West, Bergen, Professor Else Mundal, Department of Scandinavian Literature and Languages, University of Bergen, Senior Lecturer Jón Viðar Sigurðsson, Department of History, University of Oslo, and Professor Ingvild Øye, Department of Archaeology, University of Bergen.

Bergen, October 1998
Ingvild Øye
Chief Editor

Ingvild Øye

Introduction

The medieval town of Bergen was an agglomeration of wooden constructions and structures: buildings, streets and quays were all built in wood, with a few exceptions. Timber was continuously used as the main building material right from the founding of the town, and fires were a constant threat. Throughout the centuries fires ravaged large areas of the town, sometimes completely. Eight medieval conflagrations and a couple of more restricted fires at Bryggen have been identified and are recorded in the written sources. These dramatic events naturally had major consequences for urban life and the development of the town.

At the same time each fire represented new challenges and opportunities when it came to rebuilding and changing the townscape. Not only were these dramatic and sweeping fires reported and recorded, as was natural in one of Norway's major towns and the centre of royal administration in the high Middle Ages. The fires are also more or less fossilized as fire layers in the underground and can be recorded archaeologically.

When excavations started in the northern part of the Bryggen area, east of the harbour bay of Vågen, after the fire in 1955 the archaeologists were from the first moment looking for traces of earlier fires, and not only as a means of establishing a relative chronology. They knew from historical literature that the area had been afflicted by several extensive and some more restricted fires between 1170 and 1702, and hoped to be able to relate fire layers to historically documented fires. This was a method first suggested and applied in Bergen by the local historian Christian Koren Wiberg (Koren Wiberg 1908, Tillæg, 4–5; 1921, 15, 82).

In the course of the Bryggen excavations 1955–68, a number of fire layers were uncovered. In places they would be so entangled as to make it impossible to distinguish between them, and traces of extensive fires would in other places disappear altogether (Herteig 1969, 31). Still, it was deemed possible to trace eight fire horizons across the large site, and finds were denoted in relation to them. Fire layers thus became the key strata in recording the relative as well as the absolute chronology. The situation at Bryggen was specially favourable in that the occupation layers were more or less intact beneath the burnt-out upper crust.

Attempts were also made at relating the excavated fire horizons to fires recorded by historians; this was first done by counting backwards from the conflagration in 1702, the last one before that of 1955. As time went on, stratigraphically placed artefacts, notably runic inscriptions, were interpreted as to confirm the absolute dating of the fire layers. In later years, such dates have been put to test by exploiting the advances made in the dating of English and Continental pottery imported to Bergen (Lüdke 1989; Blackmore & Vince 1994). In this fashion the director of the excavations of the large Bryggen site, Asbjørn E. Herteig, and his collaborators have gradually established not only a relative but also an absolute chronology for the various periods of occupation within the site. In several publications Herteig has given an account of the dating system on which the excavations were based (Herteig 1969, 28–33; 1985, 21–33; 1991, 12–16).

The fires which form the basis of the absolute chronology at Bryggen have been dated as follows: 1170/71 (VII), 1198 (VI), 1248 (V), 1332 (IV), 1413 (III), 1476 (II), and 1702 (I). Most of these fires are directly or indirectly reported in more than one written source and with the exception of the two earliest ones the sources are contemporary and in some cases even eye-witness accounts. Herteig had, however, problems in dating what he considered an historically unrecorded fire at some time before the conflagration of 1248 (V). How to place this fire in relation to VI (1198) and VII (1170/71) was considered extremely difficult, due to lack of archaeological evidence for absolute dating. In addition there were two archaeologically identified local fires *a* and *b* in Bugården South and a historical recorded fire III b in 1393, which has been archaeologically confirmed in two tenements.

As to the dating of the historically unrecorded fire before 1248 there are three possible solutions, all of them suggested by Herteig: It was (1) it took place before VII (1170/71), (2) it took place between VII and VI (1198), or (3) between VI and V (1248) He ended up in preferring the alternative 1 (Herteig 1985: 26–33).

Lately, objections have been raised to parts of Herteig's chronology (Hansen 1994; Dunlop & Sigurðsson 1995). As to its relative aspects, it has been argued that certain types of pottery are misplaced stratigraphically, indicating that mistakes have been made in tracing layers across the site. Moreover, mechanical excavation of layers has not permitted a distinction to be made between primarily deposited finds and those secondarily deposited and possibly older (Hansen 1994, 40).

In view of the evidence from later excavations in the original town area east of Vågen, it has been argued that the alternative of an extra fire between 1198 and 1248 is the most satisfactory one. Pottery dates from such excavations would seem to support the fact that a fire some time in the years 1225–30 affected both the

southern and central part of Bryggen and the settlement areas surrounding St Mary's Church further north; it must therefore have been more than just a local fire. This fire would also best account for the unrecorded fire in the large Bryggen site (Dunlop & Sigurðsson 1995; cf. Hansen 1994, 44, 169).

Time is now ripe for scrutinising the new arguments more closely and discussing their methodological and factual implications. This is why the question of medieval fires in Bergen has been made the theme of this volume of the Bryggen Papers. If the chronology preferred by Herteig must be re-evaluated it will entail a different view of the tempo of urban development in Bergen in the last part of the 12th and the first part of the 13th centuries. Herteig's dating of the historically unrecorded fire before 1170/71 implies a period of very high activity and several building phases before 1200. In this light, the last part of the 12th century seems to represent a breakthrough for Bergen as an international commercial centre. If, on the other hand, the fire in question should be dated to around 1230 the urban expansion before 1200 becomes less impressive. It is therefore extremely important to get to the heart of this issue.

One precondition of satisfactory solutions to chronological problems such as the ones mentioned is that the written evidence of fires in the area is completely known and critically evaluated. The editorial board has therefore asked Knut Helle to give a survey of the medieval fires in Bergen as recorded in written sources. In connection with his work on the medieval history of Bergen (Helle 1982), Helle put at the disposal of the inner group of researchers of the Bryggen material a brief photocopy about these fires (Helle 1979). This survey has frequently been referred to in later publications, but has not been available for a wider audience. Helle has now compounded a more worked out survey of the various fires and added an evaluation of the written evidence of medieval fires in Bergen, the first complete overview of its type. How reliable are the historical accounts of each single fire? How far did they reach? And is it likely that major fires would have escaped the attention of contemporary historians and annalists? Helle's extended survey contains valuable information for all scholars working on the development of the topography of medieval Bergen. Helle does not find it likely that a major fire around 1230 would take place unnoticed by the author of Hákonar saga Hákonarsonar. He does not exclude the possibility of such a fire, but maintains that it can only be accepted on the basis of solid archaeological evidence.

The contributions to the present volume of the Bryggen Papers naturally focus on the chronology of the three oldest fire levels recorded at Bryggen and its surroundings, this is particularly the case with Gitte Hansen's article. She

concentrates on the use of the dendrochronological samples to determine the absolute chronology of the earliest fires at the Bryggen site. In her methodological analysis she also discusses and evaluates the ceramic material that can throw new light on the absolute dating of the three oldest fires at the Bryggen site, the fire sequence before 1248, dealing with the relationship between relative and absolute dating. By analysing new dendrochronological samples she has gained important new information on the town's earliest history, dating fire layer VIII to about 1120 or somewhat later. The following fire layers are given a more solid archaeological dating: fire VII to about 1170 and fire VI to about 1200, which supports the written evidence of fires in 1170/71 and 1198.

No complete archaeological survey of Bergen's medieval fires outside the large Bryggen site has yet been presented. Rory Dunlop's contribution represents an attempt to collate the available archaeological information from sites investigated since the extensive Bryggen excavations took place. He presents and discusses the different fires in a chronological order, with special focus on the oldest ones. He tries to determine the degree of continuity between the archaeological material and the written sources. He also wants to assess the validity of the current approach to the dating of archaeological sites in Bergen. The methods involved include 14C-dating and Thermoluminisense (TL), methods that were not used when the Bryggen chronology was established. The ceramic material is also seen as chronologically important. His conclusion is that the archaeological evidence supports a historically unrecorded fire around 1230, but his results have not been confronted with Gitte Hansen's new dating of period I.

To what extent does the archaeological research carried out in recent years, and presented in this volume, change our knowledge of the chronological development of the medieval topography of Bergen? And how should the problems of chronology be approached in the future? The editorial board has asked the leader of the large Bryggen excavations, Asbjørn E. Herteig, to respond to the new inputs in the chronology debate. In the last article in this volume, Herteig evaluates the previous articles, and presents his own view of the present research situation.

The problems of the fire chronology of medieval Bergen have not been finally solved in this volume. On the contrary new and important questions arise: How is it possible to correlate fire layers in different parts of the town? How long did it take to rebuild a town like Bergen after a conflagration? The question of re-use of building material also requires further investigations. Even though final solutions have not been reached, fresh data have been presented and analysed in a wider context and new insights gained into the town of Bergen's earliest history.

New points of views have been put forward and important methodological questions raised and discussed on a broad basis. Research is an ongoing process, often with arbitrary answers. The editorial board of the Bryggen Papers wants to stimulate scholarly debate and bring forward arguments, new views, both methodological and theoretical, to the fore. We hope that this volume will stimulate the work on basic chronological and methodological questions, which is a backbone of all historical studies.

Bibliography

Blackmore L.& A. Vince 1994. Medieval Pottery from south-east England found in the Bryggen excavations 1955–68. *The Bryggen Papers. Supplementary Series*, No 5, 7–159, Bergen.

Dunlop, A. R. & J. V. Sigurðsson 1995. An interdisciplinary investigation of Bergens forgotten fire: Confrontation and renconciliation, *Norwegian Archaeological Review,* 28 (2), 73–92.

Hansen, G. 1994. *Den overordnede bebyggelsestopografi omkring 1190 i Bergen.* Riksantikvaren, Utgravningskontoret for Bergen, Bergen.

Helle, K. 1979. *Branner i Bergen i middelalderen, en oversikt*. Stensil.

Helle, K. 1982. *Kongssete og kjøpstad: Fra opphavet til 1536. Bergen bys historie*, vol. 1, Bergen.

Herteig, A.E. 1969. *Kongers havn og handels sete*, Oslo.

Herteig, A. E.1985. The archaeological excavations at Bryggen, "The German Wharf", in Bergen, 1955–68*, The Bryggen Papers. Main Series*, 9–49, vol. 1.

Herteig, A. E.1991. *The buildings at Bryggen, their topographical and chronological development. The Bryggen Papers. Main Series*. vol. 3, part 2 + plates. Bergen.

Koren Wiberg, Chr. 1908. *Bidrag til Bergens kulturhistorie*, Bergen.

Lüdtke, H.1989. The Bryggen pottery I. Introduction and Pingsdorf Ware*, The Bryggen Papers. Supplementary Series*, vol. 4, Bergen.

Knut Helle

Medieval fires in Bergen according to written sources

The written evidence for the medieval history of Bergen is, by Norwegian and even Scandinavian standards, quite rich. This is due to the function of the town as an ecclesiastical centre, as the high medieval capital of Norway, and not least as the only internationally important commercial centre of medieval Norway (Helle 1982, 13–15, 173–82, 693–97).

Yet, minutes of the governing bodies of the town have not been handed down for any period of the Middle Ages, and no local medieval archives have been preserved directly. The evidence for fires in the town is mainly to be found in narrative sources: sagas, annals, chronicles, and other historical writings. Some additional information can be gained from scattered documents issued in the town or abroad and from late medieval Hanseatic records, notably those of the town of Lübeck, whose people dominated the late medieval Hanseatic trading station or *Kontor* in Bergen.

However, since there is no systematic documentary coverage of any sector of the town's life for longer periods, one should be very cautious in drawing conclusions *e silentio*. Even if there is positive written evidence for quite a few medieval fires in Bergen, extensive as well as more restricted ones, one can never be completely certain, from written sources, that fires have *not* occurred in a given period. This goes not only for restricted fires, which would less easily catch the attention of contemporary or later historiographers, but even for major ones.

On the other hand, the narrative coverage of the medieval history of Bergen is for considerable periods so good as to make it difficult to believe that extensive fires have gone by quite unnoticed by historical writers. True, the possibility cannot be excluded. But in such cases archaeological evidence needs to be particularly strong and unambiguous in order to substantiate the occurrence of such a fire.

Writing of history in Iceland and Norway did not seriously start until the first half of the twelfth century, and Bergen was not drawn into the picture until the Icelander Eiríkr Oddsson wrote the first known kings' saga, a near-contemporaneous work on the early phase of the 'civil wars' which broke out in the 1130s. Eiríkr's work,

Hryggjarstykki, has only been handed down indirectly as a source for later collections of kings' sagas, such as *Morkinskinna*, *Fagrskinna* and *Heimskringla*. Presumably, it formed the basis for the detailed description in these compendia of fighting in Bergen in 1135 and possibly also in 1155 and 1160 (Helle 1982, 3–6, 131–32; cf. Knirk 1993, 363). At any rate, from the 1130s onwards, sagas give reliable glimpses of events taking place in Bergen, also revealing important details of the physical structure of the town. There is, however, no continuous coverage of major occurrences in town, so that the first Icelandic saga mention of a major fire, in the winter of 1170–71 (below No. 1), does not exclude the possibility of earlier town fires.

Saga evidence improves dramatically with the monumental and detailed saga of King Sverre (1177–1202), started by the Icelandic Abbot Karl Jónsson under Sverre's supervision in 1185–88 and probably completed before 1210, by Karl or another author (Holm-Olsen 1972, 551–57). The saga is narrated in a distinctively chronological manner; by help of its intrinsic relative chronology the reader is able to keep track of the course of events year by year (Einarsdóttir 1964, 217–32).

By the beginning of Sverre's reign Bergen had developed into the largest and most important town of Norway, eagerly fought for by the parties of the civil wars. Consequently, *Sverris saga* contains numerous references to events and conditions in the town; they generally occur in connection with the almost annually mentioned visits and sojourns of Sverre or his adversaries, and include a description of the extensive town fire of 1198 (below No. 3; cf. Helle 1982, 132–33 and index under *Sverres saga*). Only for five of the twenty-five years of Sverre's reign is information on Bergen lacking (1178, 1189–91, 1199). Other major fires than that of 1198 cannot be excluded, but they are not likely to have escaped the attention of the saga writer(s).

The same goes for the period following Sverre's death in 1202, up to and including the year of 1209. This period was dominated by continued civil wars, and is covered year by year in the two near-contemporaneous versions of the so-called *Bǫglunga sǫgur* (Knirk 1993, 364). For one thing, they describe the burning and breaking down of Sverre's castle in Bergen in 1207 (below No. 4). The ensuing years of peace up to the accession of King Håkon Håkonsson in 1217 are only treated selectively and summarily in the longer version of *Bǫglunga sǫgur* and in the first part of *Hákonar saga Hákonarsonar*. There are some references to Bergen, but major events in the town 1210–16 may well have passed unnoticed.

From the accession of King Håkon in 1217 his saga sets a new standard for the narrative treatment of Bergen. According to the saga, there was not a single year in Håkon's long reign (up to 1263) in which he did not visit Bergen, and he spent twenty-five regnal winters there. Consequently, the saga contains annual references to the town up to Håkon's death (Kjær & Holm-Olsen (ed.) 1910–86 and Mundt

(ed.) 1977, indexes under *Bjǫrgvin*; cf. Helle 1982, 552–54). The narrative is arranged in chronicle fashion, the account of each single year ending in a statement of where the king had his winter seat and numbering that winter within his reign.

Hákonar saga was commissioned by Håkon's son, King Magnus, and composed by the Icelander Sturla Þórðarson in the mid-1260s. Sturla based his narrative partly on records, most of them probably from the royal archive in Bergen, partly on eye-witness testimony. His way of working resulted in the factually most detailed and reliable saga preserved of any Norwegian king (Helle 1961, Bjørgo 1967). For one thing, its account of the great town fire of 1248 is the most exhaustive description known of a medieval conflagration in Bergen (below No. 5).

There is, however, no mention in *Hákonar saga* of the extensive fire argued by archaeologists to have occurred east of Vågen at some time during the years 1225–30 (above, p. 10–11, and below, pp. 135–137), nor of any other town fire in the course of Håkon's reign. The saga has it that the king played a conspicuous role in fighting the fire of 1248, and it has lately been presented as 'a virtual certainty that the saga's author would have ignored any fire at which the king was *not* present, since there would be nothing to gain [enhancing the glory of the king] by its inclusion' (Dunlop & Sigurðsson 1995, 87). The underlying assumption is that the presumed fire 1225–30 may well have occurred during one of Håkon's absences form Bergen in this period. The years 1227/28 have been suggested as particularly likely for such a fire, as the king was now absent from Bergen, devoting his energies to the quelling of a rebellion in eastern Norway (ibid., 90).

However, the matter is more complicated than that. King Håkon was not totally absent from Bergen in any of the years 1225–30. On the contrary, he stayed there for considerable periods in all the years mentioned:

1225: King Håkon came to Bergen shortly after Easter. Earl Skule had spent the earlier part of the year there, waiting for the king to arrive in order to celebrate his wedding to Skule's daughter, Margareta. After the wedding 25 May the king and earl stayed on in Bergen for a long part of the summer (Kjær & Holm-Olsen (ed) 1910–86, 416, 419–20).

1226: King Håkon arrived in Bergen at the beginning of the year and waited there throughout part of the spring for the naval levy (*leiðangr*) from western Norway to assemble. He was back in Bergen for a planned political meeting in the summer, then returned to eastern Norway, where he ordered provisions to be sent from Bergen for Christmas (ibid., 433–34, 436–37, 442–44).

1227: King Håkon went from Oslo to Bergen in August and stayed in the royal estate together with Earl Skule. Skule left in the autumn, but the king spent the winter in Bergen (ibid., 456–58).

1228: King Håkon stayed in Bergen until he left for eastern Norway at some time during Lent. He returned to Bergen later in the year and spent the winter there (ibid., 558, 460–61).

1229: King Håkon must have stayed in Bergen for most of the year; he is not reported to have left for eastern Norway until the autumn (ibid., 462).

1230: King Håkon left Oslo for Bergen in the spring. He stayed on in Bergen and spent the following winter there (ibid., 463–64, 467).

It is true that *Hákonar saga* primarily follows the movements of its leading character. However, since the king sojourned for longer periods in Bergen in all the years 1225–30, one would expect an extensive fire such as the one suggested, or the consequences of it, to have affected him in some way or other and attracted the attention of the saga writer. This goes not least for the years 1227 and 1228, when he spent the winters in Bergen. Moreover, *Hákonar saga* does not *exclusively* deal with the movements of the king and his personal role in the course of events. Occurrences affecting other leading characters and the kingdom in general are integrated in the narrative or added in an annalistic fashion. A major fire in the most important town of the realm, where the main royal residential estate was situated, would thus be worth mentioning even if the king was not directly involved in person.

In keeping with the general evaluation of the written evidence expressed above, I would hesitate in excluding the possibility of an extensive town fire in the years 1225–30. But in view of the general coverage of events in *Hákonar saga*, one would not normally expect an incident of that importance to have passed unnoticed. This, then, is an example of a research situation in which particularly solid and unambiguous archaeological evidence is required for making good an extensive town fire. I leave it to further archaeological discussion to decide whether such standards have been or can be met in this particular case.

The writing of contemporaneous or near-contemporaneous sagas of Norwegian kings ended with the saga of King Magnus Håkonsson (1263–80). *Magnúss saga lagabœtis* was started by Sturla Þórðarson at the instigation of King Magnus himself in the late 1260s and completed shortly after his death. Only two short fragments of the saga have been preserved, but more of it is known indirectly, since later Icelandic annalists made abundant entries from it (Einarsdóttir 1993). One of the entries reports a fire in the large stone hall of the royal estate in Bergen in 1266 (below No. 6).

The origins of the writing of annals in Iceland and the interrelationship of the various annals preserved is still not well enough understood. But there is little doubt that the entries on Norwegian history up to about 1280 derive primarily from older Icelandic historical works (Benediktsson 1993, 15; cf. Einarsdóttir 1964,

319–26). In these matters, the annalists were highly dependent on the kings' sagas. Consequently, their entries on Norwegian history have no independent source value for events of which the saga sources are themselves preserved, such as in the case of *Hákonar saga*. But due to the loss of most of *Magnúss saga*, the annals become important primary sources for Norwegian history after 1263 and remain so until the early fifteenth century.

From the beginning of the fourteenth century, at the latest, the Icelandic annalists were recording important events in Norway contemporaneously. As Bergen was in this period the virtual capital of Iceland, there are references to major events taking place in the town, among them the fires of 1332, 1393, and 1413 (below Nos. 7, 9–10). Given the vivid contact between Iceland and Bergen and Bergen's importance for Iceland, one would not expect major town fires to pass unnoticed by the Icelandic annalists. So, unless other evidence points clearly in that direction, there is no reason for assuming that other conflagrations than those mentioned in the annals took place from the late thirteenth century up to and including the fire of 1413.

The importance of Bergen as an international commercial centre also caused the fires of 1393 and 1413 to be recorded in sources of foreign origin. The 1393 fire was caused by the band of pirates known as the *Vitalienbrüder*, and destroyed houses belonging to English merchants. This is the reason why it is known from near-contemporaneous English records (below No.9).

As the sacking of Bergen by the *Vitalienbrüder* was a momentous incident in Hanseatic history, it also found its way into the urban chronicles of Lübeck, from now on important for our knowledge of major events in late medieval Bergen (Helle 1982, 696–97). The attack is mentioned by the contemporary chronicler Detmar, who recast the earlier Lübeck chronicle material and continued it for the years 1386–95, and by later chroniclers who derived their primary information from Detmar (Storm 1898, 429–31, Koppmann 1899, XIII–XVI). One of these chroniclers was Hermann Korner, who in his *Chronica novella* reported contemporaneously on the second fire caused by the *Vitalienbrüder* in Bergen, namely that of 1429. This fire is also mentioned in the *Rufus-Cronik*, whose author knew a now lost older version of Korner's *Chronica novella* (Koppmann 1899, XV–XVI).

Until Hermann Korner's death in 1438 urban chronicle writing was in Lübeck attached to the two Mendicant houses of the town. Some eight years later the town council took over the responsibility for the annual recording of important events, the result being an official *Ratschronik* covering the period 1438–85 (Bruns 1910, IX, XII). Here is treated the Germans' destruction of the monastery of Munkeliv by fire in 1455 (below No. 13). Under 1476 there is a contemporaneous discussion of

the causes of the great Bergen fire of that year (No. 15). This fire was also duly noticed by the former secretary of the Bergen *Kontor* (1450–59), Christian von Geren, in the chronicle he wrote in Lübeck from 1470 to 1486, recording contemporary events known to him. The first part of his chronicle covers the years 1350–1469, purporting to be an extract of a now lost 'Lübeck chronicle'. Presumably, Geren had himself composed this chronicle, making use of personal recordings and notes from his career in the service of the council of Lübeck, the Bergen *Kontor,* and the company of *Bergenfahrer* in Lübeck (Bruns 1900, 307–37). His special interest in Bergen made him mention the earlier town fires of 1413 and 1429. From his own time in Bergen he knew the local fire in the tenement of Straumen 1454 (below No. 12) and the German destruction of the monastery of Munkeliv in 1455. Back in Lübeck, in the service of the *Bergenfahrer*, he also recorded the destruction of the Franciscan house of Bergen by fire in 1464 (No. 14).

In the sixteenth century secretaries of the Lübeck *Bergenfahrer* included historical notices in the *Schüttingsrechnungsbuch* (account book) of the company (Bruns 1900, 338–44). This is the reason why we are reliably informed of the fire that afflicted five tenements in the northern Bryggen area in 1527 (below No. 17). As in addition the Lübeck *Niederstadtbuch*, a publicly authenticated register of debts and contracts, is of some help in defining the extent of the 1413 fire and the cause of the 1476 fire, it becomes clear that the Lübeck and Hanseatic coverage of Bergen fires from the late fourteenth to the early sixteenth century is quite extensive. Major fires affecting the Bryggen area, where the *Kontor* was situated and the Germans owned the houses, would presumably not have escaped mention in the material that has been handed down, and we have seen that the special interest and insight of Geren and the Lübeck *Bergenfahrer* in Bergen affairs caused even a few restricted fires to be recorded.

In the second half of the sixteenth century there was a reawakening of Norwegian history writing among the so-called 'Bergen humanists'. In their works – notably the anonymous *Bergens Fundas* ('the foundation of Bergen', composed 1559/60), the diary of Absalon Pederssøn 1552–72, and his historical treatises *Oration om Mester Geble* and *Om Norgis Rige* ('on the realm of Norway', 1570) – they made use of documentary material that has now partly been lost. Consequently, their works are of some significance as sources for the medieval history of Bergen. But their chief historical importance lies in their accounts of contemporary and near-contemporary events and conditions (Helle 1982, 697). Among the fires recorded by *Bergens Fundas* and Absalon Pederssøn is that on Stranden, west of Vågen, in 1489 (below No. 16), an area outside of the immediate German field of interest. We also hear of the above-mentioned fire in the northern Bryggen area 1527, the destruction of the Dominican house of Bergen by fire in 1528 (below

No. 18), and the burning and breaking down of the monastery of Munkeliv in 1537 (No 19).

To sum it up, the narrative coverage of fires in medieval Bergen may be regarded as quite good from the start of the *Sverris saga* in 1177 up to and including the account of the years 1202–9 in *Bǫglunga sǫgur*. It is possible, but not probable, that other major fires than that of 1198 have occurred in this period. Before 1177 the saga information on Bergen is too accidental to exclude other fires than the one mentioned in 1170/71. The years of peace 1210–16 are only sparsely treated in the longer version of *Bǫglunga sǫgur* and the first part of *Hákonar saga*, and major events in Bergen may well have escaped the attention of the saga writers. But from the accession of King Håkon Håkonsson in 1217 and throughout the rest of the Middle Ages extensive Bergen fires would probably normally have been picked up in turn by the authors of *Hákonar saga*, Icelandic annals, and Lübeck chronicles. Though in the case of the Lübeck chronicles and other Hanseatic recordings it must not be overlooked that other parts of Bergen than the Bryggen area lay outside the immediate German field of interest, so that for instance the fire on Stranden in 1489 passed unnoticed.

As stressed above, the possibility of other major fires than the ones recorded cannot be excluded even in periods of solid narrative coverage, but archaeological evidence should be strong and unambiguous in order to substantiate the occurrence of such fires. So far, archaeological finds have not been interpreted as to indicate other extensive medieval fires than those historically documented from 1248 onwards, which does in itself add support to my general evaluation of the extant written evidence. As for more restricted fires, affecting only one or a few buildings, they may more than once have occurred without leaving traces in written sources.

The single fires 1170/71–1536

In the following section the medieval fires recorded in Bergen will be treated individually in chronological order. First (A) will be rendered the relevant contents of the sources for each fire, with important passages translated verbatim into English and the original texts of these passages added in end notes. Secondly (B), I shall comment on the credibility of the sources and the extent of the area affected by the fire in question.

1. 1170/71, winter

A. Sources

Prestssaga Guðmundar Arasonar (the 'Priest Saga' of the later Bishop Guðmundr Arason): 'That was called the good winter. At that time the town of Bergen burnt.

At that time the holy Sunniva had been brought to Bergen from the island of Selja earlier in the spring, and it stopped the fire when her shrine was carried against it' (Karlsson (ed.) 1983, 37; cf. Kålund (ed.) 1906–11, vol. 1, 133).[1]

Icelandic Annals:
Entries in several annals under the year 1172 summarily state that 'Bergen burnt' (*Isl. Ann.*, 117, 253, 323, 475; *Flat.*, vol. 3, 517).[2]

B. Commentary

The *Prestssaga* is preserved only as parts of the later sagas of Bishop Guðmundr Arason and in abridged form in the compendium of *Sturlunga saga*. It offers an account of Guðmundr's youth and priesthood, and is generally thought to have been written before 1250 (Karlsson 1993, 245). The saga is characterized by an accurate relative chronology; it follows Guðmundr year by year, adding a varied material of annalistic notices to the story of his life. Among them is the entry on the first known fire of Bergen. As another entry under the same year concerns the murder of Thomas Becket in 1170 (*Biskupa sögur*, vol. 1, 417–18) and the fire occurred in the winter following the translation of the relics of St Sunniva to Bergen, it is clear that the winter in question must be that of 1170–71. We know that the Sunniva relics were placed on the high altar of the Christ Church cathedral in Bergen on 7 September 1170 (Storm (ed.) 1880, 151–52).

As some of the annalistic material of the *Prestssaga* is found nearly in the same form in the Icelandic Annals, such material has been considered to be the result of later insertions in the saga from the annals. But more recent research has made it clear that annalistic material, including the entry on the Bergen fire 1170/71, was part of the original *Prestssaga*. It is, however, disputed whether such material was recorded and woven into the narrative by the author himself (Einarsdóttir 1964, 293–317) or added from a now lost annal (Karlsson (ed.) 1983, CXLVI–VII).

At any rate, the text of the *Prestssaga* must, even in its indirectly preserved state, be considered more original than the texts of the extant Icelandic annals. The dating of the fire to the winter of 1170–71 in the saga should therefore be preferred to the annals' date of 1172, all the more so since it links the fire with the reliably dated translation of the Sunniva relics in 1170. However, as the origins of Icelandic annal-writing is still not well understood, and the entry on the fire of 1170/71 in the *Prestssaga* cannot safely be traced back to a contemporaneous or near-contemporaneous recording, the exact date of the fire should not be held as more than probable. One cannot exclude the possibility that there was some foundation for the annals' date of 1172.

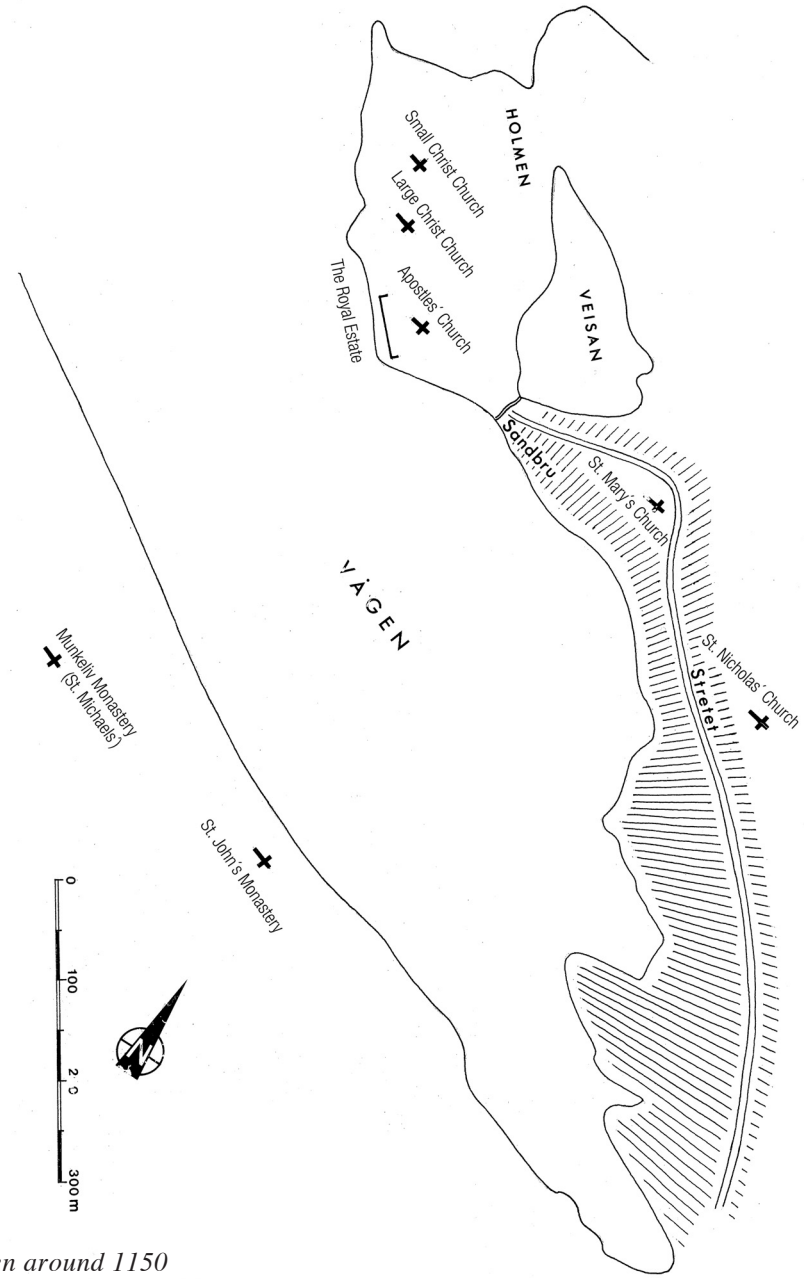


Fig. 1. Bergen around 1150
This is a rough outline of the urban topography of Bergen before the fire of 1170/71. The built-up area on both sides of the only long street at that time, Stretet, is approximately marked out, and the ecclesiastical institutions are indicated by crosses.

The account of the *Prestssaga* would seem to suggest that the fire was quite extensive, but there is no basis in the saga for defining more closely the area affected. Given that the shrine of St Sunniva was really used in an attempt to stop the fire, it must have been carried southward from the cathedral at Holmen ('the holm'), east of the mouth of Vågen, as was the case in the fire of 1198 (below No. 3). The fire may then have threatened Holmen and the northern part of the Bryggen area beyond Sandbru ('the sand bridge'), the spit of land that connected Holmen with the rest of the town, leading between Vågen and the boggy area of Veisan (cf. Helle 1982, 28–30). But if the saga is also right in stating that the fire was stopped by the shrine, Holmen itself may have been spared, perhaps also more or less of the northern Bryggen area.

A critical evaluation of the written evidence must also take into consideration that the first recording of the fire of 1170/71 in writing may not have taken place until after the completion of *Sverris saga*. In that case, one cannot completely exclude the possibility that the role of the Sunniva relics in the *Prestssaga*'s account of the fire in 1170/71 was modelled on the corresponding use of them in 1198, as described in *Sverris saga*.

2. 1194?

A. Source

Flateyjarannáll:

An entry under the year of 1194 runs like this: 'The town of Bergen was burnt'.[3] The same annal has another entry on the conflagration of 1198 (*Flat*., vol. 3, 520–21).

B. Commentary

Flateyjarannáll, recorded in the late fourteenth century, is the only source mentioning a fire in Bergen in 1194. The fire is not recorded in the oldest preserved versions of the Icelandic annals, written down at the end of the thirteenth and the beginning of the fourteenth centuries (cf. Benediktsson 1993, 15).

Nor is any fire in 1194 recorded in *Sverris saga*, in spite of the fact that Bergen in this year figures prominently in the saga. The band of insurgents against King Sverre known as the *eyjarskeggjar* had arrived in the town in the previous autumn. They stayed over the winter without being able to take the stone castle built and garrisoned by Sverre. During Lent Sverre arrived from Trondheim. He defeated the insurgents in the hard-fought naval battle at Florvåg outside the town on Palm Sunday 3 April. After a short stay in the town he sailed to eastern Norway in pursuit of his enemies, but was back in Bergen for an important political meeting in connection with his coronation 29 June. Presumably he left the town at some

time in the autumn, as he spent the following winter in Oslo (Indrebø (ed.) 1920, 125–31).

It is not completely out of question that a more extensive fire may have afflicted Bergen in 1194, but it is not probable that this would have happened without being included in the saga account of the important events occurring in and near by the town in this particular year. Until about 1300, *Flateyjarannáll* is dependent on older annals related to versions that have been preserved (Benediktsson 1993, 15), and none of these mentions any Bergen fire in 1194. This makes it even less likely that such a fire occurred.

To be more specific: The fire entry of 1194 in *Flateyjarannáll* is verbatim the same as the entry on the fire of 1198 in the older *Lǫgmannsannáll* (*Isl. Ann.*, 245), whereas the entry in *Flateyjarannáll* on the 1198 fire follows the wording of the older *Annales regii* (ibid., 121, cf. 181). It has been demonstrated that *Flateyjarannáll* is dependent both on the part of the *Lǫgmannsannál* written by the lawman Einarr Hafliðason up to 1362 and on annals of the same type as *Annales regii* (Storm 1888, XXI, XXXVII–VIII). It then lies near at hand to assume that one of two different entries on the fire of 1198 in the sources of *Flateyjarannáll* was misplaced under 1194 when this annal was cast together in the years 1388–94.

Conclusion: Extant written evidence does not support the occurrence of an extensive fire in Bergen in 1194.

3. 1198, 10 August

A. Sources

Sverris saga:

According to the saga, King Sverre's opponents in the civil wars at the time, the *baglar* ('croziers'), set fire to Bergen in the evening of the feast of St Lawrence (10 August) during the so-called 'Bergen summer' of 1198, after having failed in their protracted efforts to take the town's castle from Sverre's *birkibeinar* ('birch-legs'). The blame for organizing the burning of the town is put on the leader of the *baglar*, Bishop Nikolas Arnesson; he wanted to punish the townsmen for their support of Sverre.

I translate the description of the fire as rendered by the generally best manuscript of the saga, *AM 327 4°* (Indrebø (ed.) 1920), with a small lacuna filled in from the manuscript *Skálholtsbók yngsta* (*Sk.*): 'In the night the *baglar* rowed in off the wharves with two vessels loaded with firewood. In one place they set fire to a house by the Church of the Holy Cross, and in another place opposite the *Fauska*-wharf (var. *Sk.* and *Eirsp.*: 'the fish-wharf') by the tenement of Finn foreman, in a third place by St Mary's Church. (*Sk.*: There was no defence by the townsmen.) It was difficult for them to gain access, as the wharves were all taken up. The

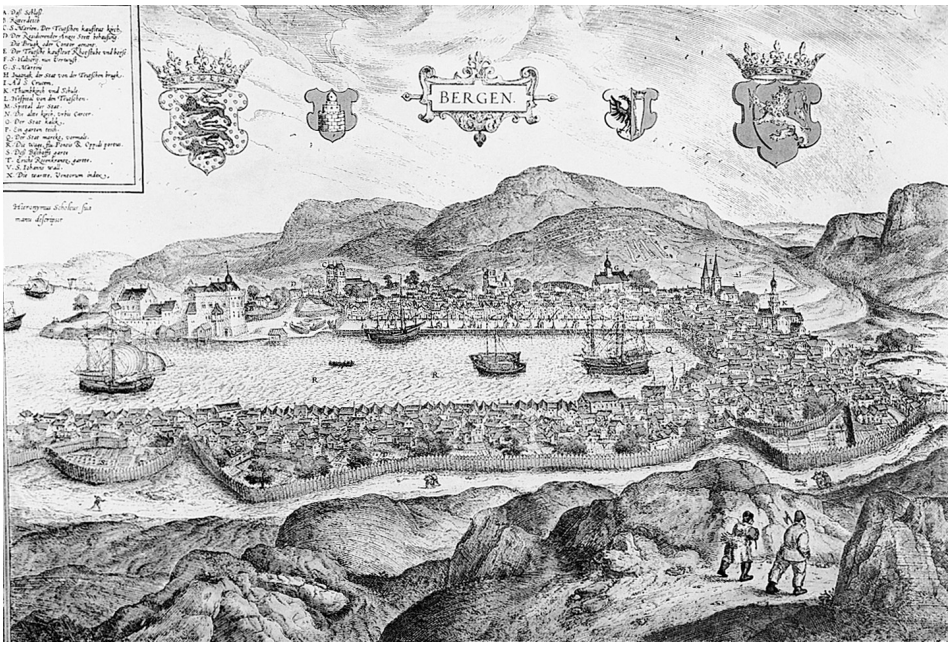


Fig. 2. The Scholeus print of Bergen c. 1580
This is the oldest extant picture of Bergen, showing the harbour bay of Vågen with a more advanced and even Bryggen quay front than the much more irregular water-front put to fire by the baglar *in 1198.*

birkibeinar were not aware of it until the town began to blaze up and they saw that they could do nothing to save the town. They feared for the castle, that it would burn. They then carried out sails and wetted them against the fire. Below the street the town was burnt down all the way from the Church of the Holy Cross at the inner end and to Sandbru, and above the street from Sandbru and in to the Church of St Nicholas. The holy crucifix was then carried against the fire from the Stone Church, and that stopped the fire. The Sunniva shrine was carried from the outside to Sandbru and placed there. The fire never went further, and that was a full-clear sign. The *baglar* were lying in their vessels out on Vågen and shooting up in the fire at people if anybody tried to save the houses or quench the fire. Many Bergen men had earlier moved away all the chattels they could manage when they heard that the *baglar* intended to do this; some moved into the countryside and some up to the castle. Bishop Nikolas was on board the vessel that brought the fire to the town, and he always told where to carry up the fire and throw it in, and he was very badly liked because of this. This was to the injury and damage of many men, so that many a man who was earlier full-well off, went away poor. The Bergen men did

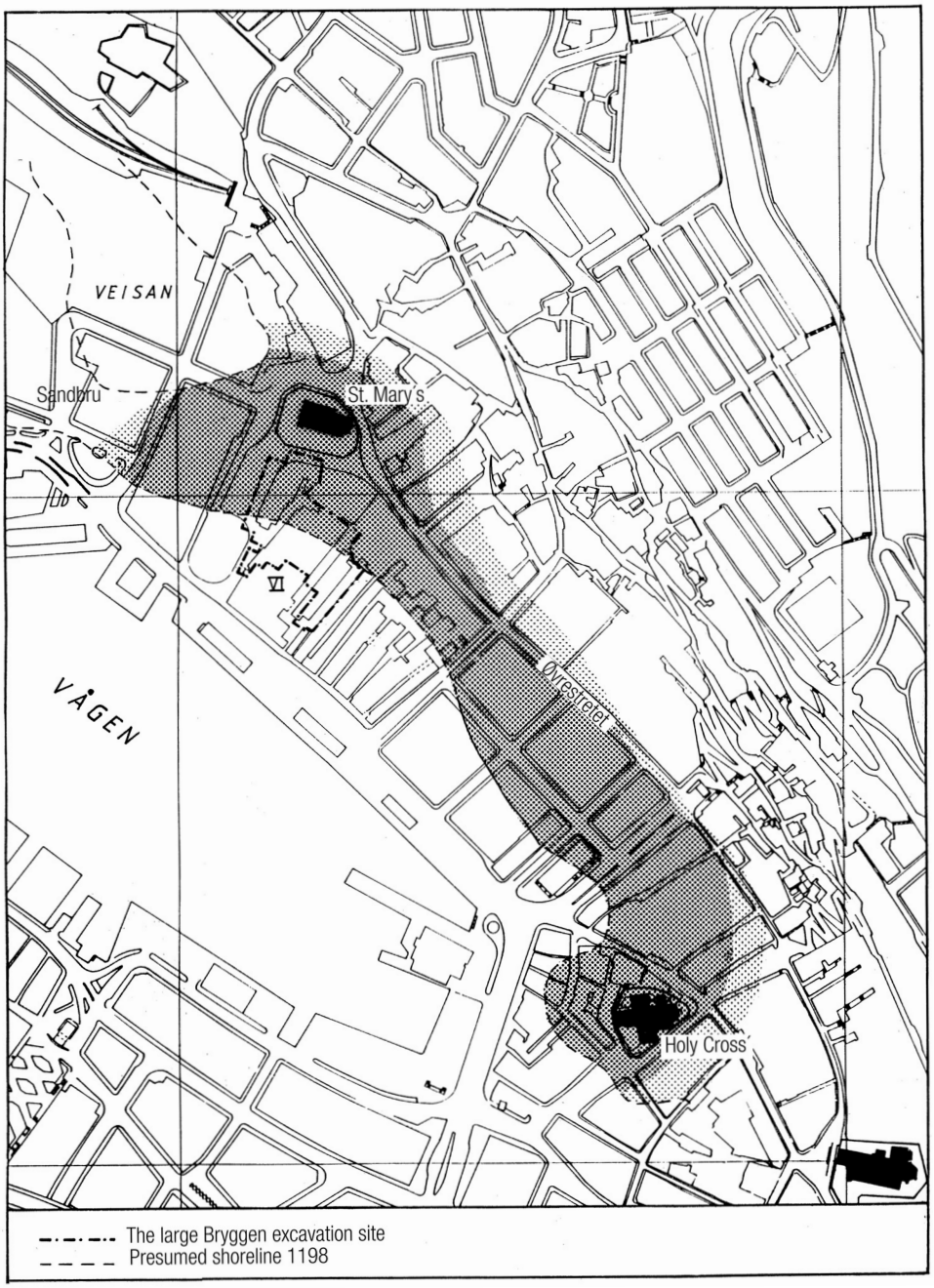


Fig. 3. Presumed extent of the 1198 fire (after A. Christensson 1988)

often remember Bishop Nikolas for this. There burnt St Mary's Church and 5 others' (Indrebø (ed.) 1920, 157–58; *Sk*., 199–201; *Flat*., vol. 2, 668; *Eirsp*., 399–400).[4]

Icelandic Annals:
Short entries under the year 1198 state that 'The *baglar* burnt Bergen' (*Isl. Ann*., 121, 181),[5] or that 'The town of Bergen burnt down' (ibid., 254).[6]

B. Commentary

The factually detailed account of *Sverris saga* is obviously based on first hand knowledge of the Bergen fire of 1198, and was written down not many years afterwards, probably before 1210. Consequently, the description of the fire must be regarded as largely reliable. The entries on the fire in Icelandic annals are undoubtedly picked up from the saga, and possess no independent source value in this matter.

The saga's demarcation of the area affected by the fire is quite clear. Between the sea and the long street leading through the whole town east of Vågen (later Øvrestretet/Øvregaten – 'the Upper Street') the built-up area was destroyed all the way from the Church of the Holy Cross at the head of Vågen in the south to Sandbru in the north. Above the street only the northern part of the built-up area was afflicted, between St Nicholas' Church in the south and Sandbru in the north.

The delimitation of the fire tallies well with the account of the procedure of the *baglar* in setting fire to the town and the mention of five churches being afflicted by the fire. Within the area defined by the saga we know of exactly five churches at this time: the churches of the Holy Cross, St Nicholas and St Mary – all of them expressly mentioned as burnt – and additionally the churches of St Peter and St Lawrence below the street in the northern part of Bryggen. There was also a church of St Olaf on the Hill (*á Bǫkkum*) above St Mary's, which was presumably spared by the fire.

4. 1207

A. Sources

Bǫglunga sǫgur:
The shorter version relates that the *baglar* came to Bergen and attacked the stone castle there: 'The *birkibeinar* went out against them. The *baglar* attacked at once. It was thinly manned before them. The *birkibeinar* withdrew from the [outer] walls into the main castle. The *baglar* got into the outer castle and took it fast and the [gate?] tower too. But when the *baglar* saw that they could do nothing with the main castle, they burnt the outer castle and placed their own men in the tower.'

The siege went on for some time, until the *birkibeinar* surrendered: 'The *baglar* then took the castle and got plenty of provisions there but little of other goods.

Fig. 4. Sverresborg. The fort of Sverresborg received its present form in the years 1807–13, when Denmark-Norway was drawn into the Napoleonic Wars. It has erased all visible traces of the medieval stone castle erected on the same site in the 1180s, burnt and broken down in 1207.

On Monday the king [of the *baglar*, Filippus] arrived in the town. On Tuesday people left the castle. On Wednesday the castle was searched, but burnt on Thursday. On Friday in the evening they started to break it down, and [went on for] the whole of Saturday. Then they got word that Earl Håkon was approaching from the east. Because of that they put out on Sunday to Florvåg.... On Monday the *baglar* went [back] to the castle and had all the townspeople blown together in order to break down the castle' (Magerøy (ed.) 1988, part 2, 95–99).[7]

The longer version adds a long story of Archbiskop Tore's role as mediator between the fighting parties. Thanks to him the *birkibeinar* were granted a safe-conduct in return for surrendering the castle (ibid., 96–98). Some details are added on the burning and breaking down of the castle: 'Afterwards they [the *baglar*] set fire to the castle. They then found out that they had not searched well enough, as melted butter was flowing profusely out through the walls. Then they burnt all that could burn in the castle, and on Saturday the wall cracked. Then they broke down the wall' (ibid., 98–99).[8]

Later on the longer version adds: 'King Inge was in Bergen and had rebuilt the King's Estate which the *baglar* had burnt together with the castle, and had the hall

placed where the great hall of King Øystein had been standing, but he did not have the Castle rebuilt' (ibid., 120).[9]

B. Commentary

Of the two versions preserved of *Bǫglunga sǫgur* the shorter one covers the years 1202–10 while the longer one ends in 1217. The shorter version tells a detailed history of the *baglar*, particularly of their fights with the *birkibeinar* 1204–8. The longer version contains the same story but has more to tell of the *birkibeinar* up to about 1210, and summarily continues their history up to the death of King Inge in 1217. Except for three short fragments the text of the longer version has only been handed down in a Danish-Norwegian translation by Peder Claussøn, printed in 1633 (Helle 1958, 9–13, 49–69). The relationship between the two versions is probably best explained by assuming that the shorter version is the original one, completed about 1210 or shortly afterwards, and that the longer version has brought the story up to 1217 by adding material from the history of the *birkibeinar* (ibid., 85–93). But it has also been maintained that the longer version is closest to the original (Magerøy (ed.) 1988, part 1, 201 and passim). However, the relationship between the two versions is of little consequence when it comes to their accounts of the events taking place in Bergen in 1207, as there is no reason for disregarding the information given by any of them.

The day by day account of the burning and breaking down of the castle cannot be placed accurately within the year of 1207. Contextually, it must have occurred at some time during the summer or autumn of that year. The fire was apparently a restricted act of war, afflicting only the stone castle on the hill and the wooden royal estate down below at Holmen (cf. Helle 1982, 544–46). What would not burn of the castle was broken down.

5. 1248, 11 June

A. Sources

Hákonar saga Hákonarsonar:

'Fourteen nights before St John's Day (var. *Fris.*: after St John's Day) there were great tidings in Bergen. Then fire broke out near the middle of the town and in that tenement which is called Straumrinn ['the stream'], in the night at the time when the bells rung over [signalling the end of the night]. But before that the weather had been dry, and the fire was fast blazing up. The king turned up inside of St Peter's Church, and few men with him. But soon though came the *hirð* [royal retinue] and townsmen, and they intended at first to defend against the fire there. But then it was blazing so strongly that they could not stand fast against it. They then went past St Mary's Church and intended to defend there. The fire went so

Fig. 5. St Mary's Church. St Mary's, the oldest still standing building in Bergen, was erected in the mid-twelfth century. The twin towers that burnt in 1248, were heightened by 6–7 m after the fire.

fast that St Mary's Church and the towers began to burn. The fire was then running so fast that it was tossed up into the castle, and it began to blaze. Then the king went there, and many men with him. Many men were burnt to death there before they could get out. But when the king came to the town [again] there was a great blaze there; people were defending out at Sandbru. The king went there and fell into great danger. It was then, as was always in time of trial, that the king went on boldly though still wisely to bring about what he wanted. Some freighters and cogs were floating there, arrived from Gotland. The king went out in a boat to the cogs and got large kettles there. They were filled with sea water and thus moved up on the wharves. The sea water was then thrown into the fire, and in that way it was quenched by the mercy of God and the king's luck. There in Bergen, a few days later, there also occurred a strange event. Thunder was rolling with lightning and struck the roofing of that loft in which was the young lord [Magnus], King Håkon's son, and tore off the roof for some fathoms. It was the great mercy of God that the lightning did not pierce through, but it flew out afterwards on Vågen and struck the mast of a vessel that was floating off the town and smashed the mast asunder in so small chips that they could scarcely be seen anywhere. One bit of

the mast did damage to a man who had come on board the vessel from the town to buy finery, but nobody else on board the vessel was harmed. The town was all burnt inside of Sandbru except for a few tenements in at Vågsbotn' (*Sk.*, 608–10; cf. *Flat.*, vol. 3, 175; *Fris.*, 535; *Eirsp.*, 627).[10]

Sturlunga saga:
As part of this compendium *Þorgils saga skarða* throws light on the Bergen fire of 1248: 'It happened there one night that fire broke out in the town; the lure was then blown all over the town. And when this warning reached the king's lodgings he dressed himself quickly and called on the men who were with him. He had the whole *hirð* and all the townspeople blown out for this unrest, and men armed themselves as for battle, and the king placed his *hirð* where he thought it was most needed. He ordered his men to go on carefully and still boldly. The fire was running so tremendously strong that it seemed unlikely that it could be quenched. Much was then attempted; fresh water and sea water were carried in [into the fire] and buildings broken down widely. The king decided where Þorgils was to stand, but he wanted to go further forward. Because of that he fell into such great peril that it seemed strange that he kept his life unharmed. Eventually, the king had a longship's sail taken and wetted all through and carried against the fire. That happened at last, that the fire went out by the mercy of God and the king's luck.'

By his effort Þorgils won the trust of the king and was thanked and rewarded by the queen. The saga also quotes from the skaldic poem Sturla Þorðarson made in memory of Þorgils:

> Fire came loose for people,
> suddenly as night set in.
> The *hirð* went out with the king
> of *hǫrðar* [people of Hordaland], the glorious prince.
> Þorgils gained, strong and fast,
> the praise of all people
> when the fire threw hot,
> radiant flames on the host
> (Kaalund (ed.) 1906–11, 144–45).[11]

Matthæi Parisiensis Chronica majora:
Under the year of 1248 there are entries on great fires many places in Europe: 'But in Norway the damaging fire raged so violently in three main cities that it struck the hearts of all with wonder and numbness. One of these, Bergen, was completely reduced to ashes with the exception of four religious houses and the palace, cha-

pel and chambers of the lord king. Eleven parishes of the city mentioned, to wit, were burnt down together with some houses belonging to the bishop of the same city. The blaze, the avenger of sin, flew all the way to the castle of the king then standing in the same city, as much as five bowshots away, like a fire-breathing dragon drawing along behind it a train. Hence, for the inhabitants nothing was more definite or manifest than that this was the severity of divine vengeance. Truly, the castle, which was built of the biggest and strongest stones, was for the larger part reduced to embers. The following day the Lord thundered over the city area, both terribly and horribly. He sent a sudden bolt of lightning and jolted a large ship that had come from England and arrived the same night, and caused the death of a man on board and wounded and hurt all the others in the ship enormously, and sent the mast into the sea, smashed into the tiniest fragments, and set in motion all the ships that were in that port, that is two hundred or more. And he who has written this had himself been in the ship that had its mast fractured. But in the same hour he celebrated Mass in a church by the shore, reciting on his arrival from the sea to bring God thanks after the dangers of the ocean. When the lord king was informed of this he ordered, for the love of him who had been in the ship, the mast to be replaced by a better and stronger one' (Luard (ed.) 1880, 35–36).[12]

Icelandic Annals:
Under 1248 there is an entry on 'Town fire in Bergen' (*Isl. Ann.*, 26, 66, 132, 190, 257, 329; *Flat.*, vol. 3, 531).[13]

Letter from Bishop Arne of Bergen 4 May 1309:
Bishop Arne orders the clerics of Bergen to remind the German winter-sitters in the town of their duty to pay tithes. If they do not pay they will be excommunicated. In support of his claim the bishop states: 'It is also the old promise and consent of the Bergen men, since the time when they met with the harm that their town was ravaged by violent fire, to pay their tithes carefully and rightly according to the old Christian laws' (*DN*, vol. 2, No. 95).[14]

B. Commentary

The conflagration of 1248 is the best documented medieval fire in Bergen. *Hákonar saga* obviously bases its description on first hand knowledge. King Magnus was probably one of the eye witnesses who told Sturla Þórðarson of the fire when he wrote the saga in the mid-1260s; the saga makes a point of Magnus' lodgings being struck by lightning after the fire. Traces of the fire would probably still be visible when Sturla first came to Bergen in 1263, and it is even possible that he had access to written documentation of it.

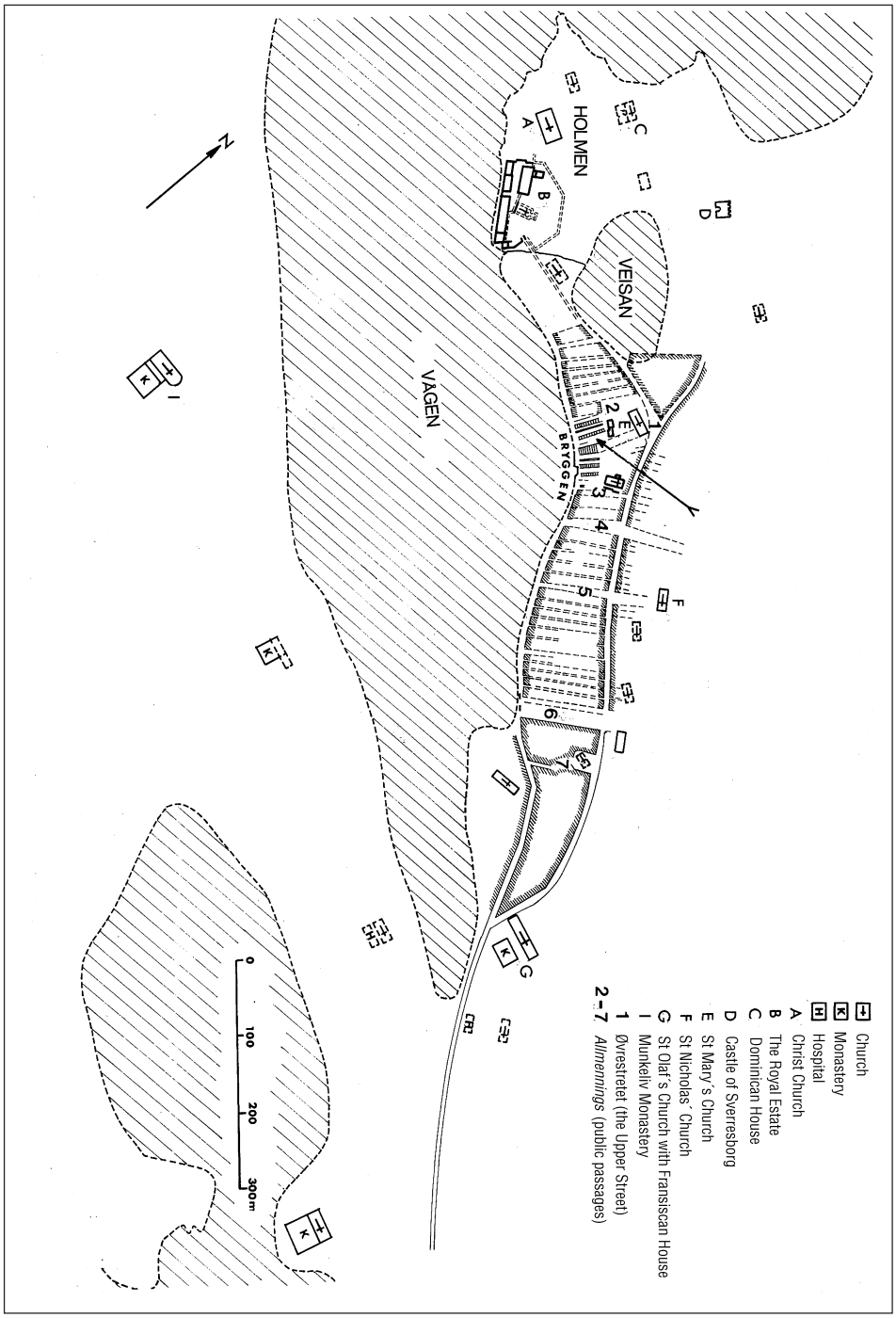
Þorgils saga skarða, partly preserved in the compendium of *Sturlunga saga*, was probably written shortly after the death of its leading character in 1258 (Benediktsson 1976). The shorter account of the fire in *Þorgils saga*, emphasizing Þorgils' role in fighting it, and the longer account of *Hákonar saga*, concentrating on the king's leading role, are obviously interrelated, supplementing each other. Þorgils did probably tell his cousin Sturla Þórðarson of the fire after his return to Iceland in 1252, and Sturla focused on Þorgils' role as a fire-fighter in the poem he made in memory of him. If *Þorgils saga* had been completed when Sturla went to Norway in 1264, it may have been one of the sources of his account of the fire in *Hákonar saga*.

In Matthew Paris' *Chronica majora* we have a description of the fire independent of the sagas. Matthew arrived in Bergen in the English ship that was struck by lightning after the fire, while he himself was saying Mass on shore, possibly in the church of his fellow Benedictines in the monastery of Munkeliv on Nordnes west of Vågen, an area unaffected by the fire. There is a discrepancy between Matthew and *Hákonar saga* in the exact dating of the thunderstorm; according to Matthew it raged on the day following the fire, in the saga a few days later. Since according to the saga the fire broke out towards the end of the night, it must have lasted well into the following day. The thunderstorm would then, as dated by Matthew, have struck still a day later. He relates that his ship had arrived in the night before thunder broke loose, which would be the night after the fire by his own dating, perhaps later if the saga is correct in dating the thunderstorm to a few days after the fire. Not in any case would Matthews himself have experienced the fire. But he witnessed its immediate results, and must have heard a lot of it from people still shocked by it.

According to three of the four main manuscripts of *Hákonar saga* (*Sk*., *Flat*., *Eirsp*.) the fire occurred fourteen days before St John's Day, that is on 11 June. This date must be preferred to that of fourteen days after St John's Day in the fourth main manuscript (*Fris*.). For reasons unknown the historian P.A. Munch thought the date to be 4 July (Munch 1852–63, vol. 4:1, 106); this mistake has been repeated by quite a few later historians.

The area affected by the conflagration is demarcated in a thrustworthy manner by *Hákonar saga*: The fire broke out in the Bryggen tenement of Straumrinn, probably situated not far to the south of the later, central Breida-allmenning (Helle 1982, 231, 242; cf. below No. 12). From there the fire spread so that the whole of the built-up area south of Sandbru and east of Vågen was destroyed except for a

Fig. 6. Bergen c. 1280 →
Schematic outline of the town as it was rebuilt after the 1248 fire and was standing when the Urban Code of 1276 was issued.



few tenements in the area of Vågsbotn ('the bottom of Vågen'). Since the castle was afflicted, the fire must have reached the hill north of St Mary's, at quite a distance from Vågen. Matthew Paris' statement that a few houses belonging to the bishop of Bergen were burnt may mean that the fire was not completely stopped at Sandbru, as indicated by *Hákonar saga*, but rather that it reached the Bishop's Estate at Holmen, just below the castle hill. On the other hand, Matthew relates that the Royal Estate at Holmen, including the chapel of the Apostles, was spared, and the Dominican house on the northern edge of Holmen must have been one of the four religious houses that according to him survived the fire. Most of Holmen must then have been spared, and it is also possible that the bishop's houses afflicted were standing in the town proper, so that Holmen was not at all affected by the fire.

According to Matthew Paris as many as eleven parishes were burnt down. It may well be that eleven churches were affected, but that does not mean that they were all parish churches. We can be fairly certain that at least ten churches were standing in the burnt-down area prior to the fire: St Mary's and St Peter's, both of them mentioned in the account of *Hákonar saga*, and additionally St Catherine's at Sandbru, St Olaf's on the Hill, St. Lawrence', St Nicholas', the Stone Church (St Columba's), the Church of the Holy Cross, St Olaf's in Vågsbotn, and All Saints'. These were hardly all of them parish churches, at least not the small chapel of St Lawrence. To reach the number of eleven churches we have to include either St Martin's south of the Stone Church (first mentioned 1271) or St Hallvard's further south (first mentioned 1276). In order to reach eleven *parish* churches we have at least to include both of them (cf. Helle 1982, 134–45, 576–78, 582–88).

Matthew's eleven parishes did probably not include that of the small Christ Church at Holmen (cf. Helle 1982, 585). Both the small and the large Christ Church, the cathedral of Bergen, were situated in between the Royal Estate and the Dominican House, which were both of them spared. The two Christ Churches can then hardly have been affected. Moreover, if the cathedral had been damaged, we would probably have heard about it in *Hákonar saga*.

No problems are caused by the four religious houses that according to Matthew Paris were left unaffected by the fire. In addition to the Dominican House on Holmen, three monastic institutions were situated outside the built-up town area east of Vågen: the Benedictine abbey of Munkeliv and the Augustinian convent of St John's west of Vågen and the nunnery of Nonneseter far to the south. The fifth and last religious house of medieval Bergen, that of the Franciscans, was probably not established until after the fire of 1248, when King Håkon handed over to the Greyfriars the burnt St Olaf's Church in Vågsbotn (Helle 1982, 576).

The entries on the fire in the Icelandic annals add nothing to the saga evidence, on which they were probably based.

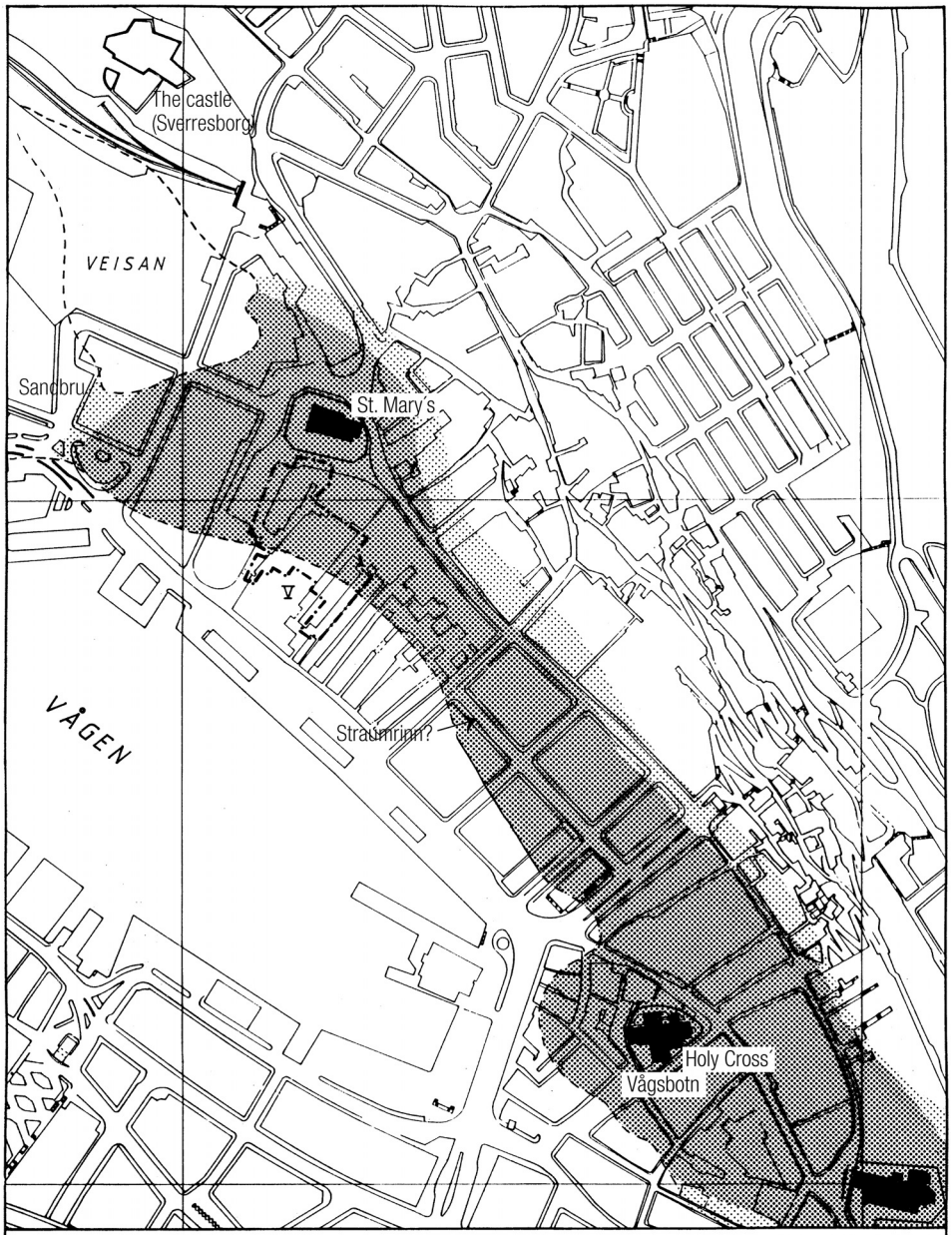


Fig. 7. Presumed extent of the 1248 fire (after A. Christensson 1988)). The map does not take into consideration that the castle of Sverresborg, too, was affected by the 1248 fire.

6. 1266

A. Source

Flateyjarannáll:

The following entry is placed under the year of 1266: 'The Hall in Bergen burnt' (*Flat*., vol. 3, 536).[15]

B. Commentary

The entry is probably based on the now largely lost *Magnúss saga lagabœtis*, which Sturla Þórðarson was compiling at the time of the fire (above, p. 18). 'The Hall' in Bergen must be the 'Stone Hall' mentioned in *Hákonar saga* as having been comissioned before 1261 by King Håkon Håkonsson, now restored as 'Håkon's Hall' (Helle 1982, 544, 546–49). The original floor of the great hall room constituting the upper storey of the building originally rested on timber joists and girders, carried by corbels in the walls and square soapstone pillars. Secondarily, Gothic stone vaults were erected as a fireproof foundation for the upper storey. This is assumed to have happened after the fire of 1266 (Fischer & Fischer 1980, 119–23).

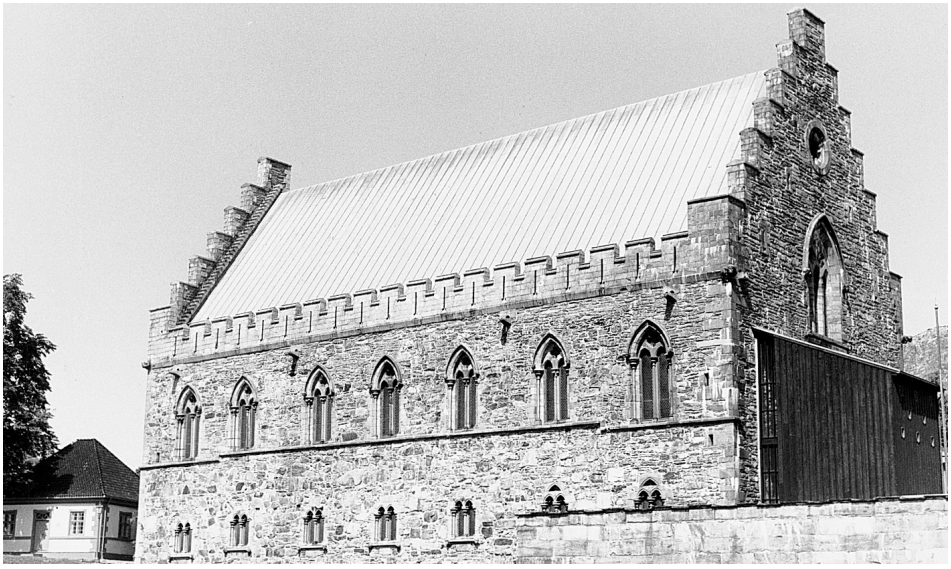


Fig. 8. 'Håkon's Hall'. 'The Hall' which burnt in 1266, was commissioned by King Håkon Håkonsson after 1247 and taken into use in 1261. It was the largest and most impressive building of the stone-built and fortified Royal Estate which was erected as the governmental centre of Norway in the second half of the thirteenth century. When the Hall was restored towards the end of the nineteenth century, the stepped gables were copied after the Scholeus print from c. 1580 (fig. 2), but the long wall with its Gothic windows is a safe representation of the original medieval building.

The fire must have been restricted to the Royal Estate. If it spread further one would expect it to have been recorded in *Magnúss saga* and consequently to have been mentioned by the Icelandic annals.

7. 1332

A. Sources

Icelandic Annals:
Three versions have a short entry on 'Town fire in Bergen',[16] *Lǫgmannsannáll* and *Skálholtsannáll* under the year of 1333 (*Isl. Ann.*, 207, 271), *Flateyjarannáll* under 1332 (ibid., 398). *Gottskálksannáll* mentions that 'The church in Bergen burnt' in 1332 (ibid., 348),[17] whereas a fragment of an annal from Skálholt contains the unique information that 'German men burnt a large part of the town of Bergen' in the same year (ibid., 220).[18]

Letter from King Magnus Eriksson to the town of Lübeck, Stockholm 10 May [1332?]:
The king urges the town of Lübeck to send two good men to Bergen about St John's Day in order to negotiate and settle with Sir Erling [Vidkunsson] and the royal treasurer 'concerning the insolences or disagreements between our advocate in Bergen and your citizens'.[19] Among the matters to be negotiated is the payment of toll, and the king wants a settlement 'concerning the injuries there inflicted on us and our people by your people and whosoever else up to this time' (*DN*, vol 8, No. 141).[20]

Announcement, Bergen 16 September 1334:
The document makes public a contract between Arnfinn, prebendary at the Brothers' Altar in the cathedral of Bergen, and on the other hand one Jon *standuœyk* and his wife, Valborg. The two parties have agreed 'that the above mentioned couple shall erect houses in half of the part in Skjeggen that the above mentioned Brothers' Altar owns, on the condition that they shall build two fire-proof stone cellars with iron doors and small iron windows and all other houses in the upper as well as the lower part in that way which the lord bishop of Bergen, *sira* Arnfinn, and the above mentioned couple want it. And the above mentioned houses shall be erected within two years' (*DN*, vol. 2, No. 207).[21]

Announcement, Bergen 27 January 1336:
The royal lawman and eight councillors of Bergen make public that they have inspected the ongoing rebuilding of the tenement of Skjeggen agreed upon in 1334. The work is being done without damage to the town of Bergen and can be completed as intended (*DN*, vol. 2, No. 215).

B. Commentary

The Icelandic annals cited are the only sources reporting directly on this fire. They were, however, now recorded contemporaneously, and should be trusted.

Three of five annals place the fire under the year of 1332. In one of the two other ones, *Lǫgmannsannáll,* the fire is recorded under the year of 1334 as having occurred 'the year before',[22] which would be 1333 according to the formal dating system of the Icelandic annals, marked by Dominical and Lunar letters. Under 1333 *Lǫgmannsanáll* also records events that actually took place in 1332, such as the death of the Norwegian Archbishop Eiliv and the consecration of the Icelandic Bishop Egill of Hólar, which may indicate that the Bergen fire, too, occurred in this year. The fifth of the annals in question, *Skálholtsannáll,* dates the fire more clearly to 1333: the same year in which Archbishop Pål Bårdsson was consecrated. But the entries referring to this year are confused by the renewed recording of Archbishop Eiliv's death in the previous year. On balance, there is little doubt that 1332 should be preferred to 1333 as the year of the fire.

The isolated statement of the Skálholt annal fragment, that it was the Germans who burnt down a large part of Bergen, is quite sensational. It would indeed be strange for an event of that importance to have escaped direct mention in the German and Norwegian sources preserved. The information in question is on the other hand unambiguous. It is given by an annals' version that is well informed of other events in Bergen, and appears to be independent of other preserved versions (Storm 1888, XX). We know from other sources that relations were strained between Germans and Norwegians in Bergen in the early 1330s (Helle 1982, 483–84). Consequently, a number of historians have accepted that the Germans caused the fire, without being able to come up with more than guesswork as to how it actually happened (see particularly Munch 1852–63, part 2, vol. 1, 259; Nielsen 1877, 197–98; Schreiner 1935, 63–65). One cannot exclude the possibility that Germans were in some way or other involved in starting the fire, but it is hard to believe that this can have been done deliberately.

King Magnus Eriksson's letter mentioning disagreements between the king's advocate and Lübeck citizens in Bergen is without year of issue, but has been dated to 1332 and interpreted as referring to the fire of that year (Schreiner 1935, 63–64). But it is far from evident that the insolences, disagreements, and injuries mentioned generally in the letter did include so serious an event as a town fire would be, and the letter has been more probably dated to 1441 (*RN*, vol. 5, Nos. 446, 470).

It would seem that the rebuilding of the tenement of Skjeggen, recorded in the years 1334–36 and including two fire proof stone cellars, was a consequence of the 1332 fire (Lorentzen 1954, 91–92). Skjeggen was situated in the northernmost

part of Bryggen, north of the public thoroughfare of Maria-allmenning (the situation is more closely discussed by Helle 1982, 230–35; cf. Herteig 1985, 23–24).

Apart from the probable destruction of the tenement of Skjeggen there is no direct or precise information on where the fire of 1332 actually raged. But the expression 'town fire' (*bæjarbruni*) indicates an extensive fire, and this is supported by the statement of the Skálholt annal fragment that 'a large part of the town' (*mikinn part af kaupstad*) was burnt down. The fire then presumably affected more than the northern part of Bryggen, but how far south it reached cannot be established from written evidence.

Gottskálksannáll records that 'the church in Bergen' (*kirkian j Biorguin*) was burnt down. The definite mention of 'the church' among the numerous places of worship in Bergen might refer to no less than the cathedral at Holmen. However, as all the other annals mention a town fire, it seems more probable that 'church' in *Gottskálksannáll* has replaced 'town' by a writer's error.

Because of the meagre written information on the 1332 fire it must be left to archaeological research to define more closely how far it reached.

8. [1369]

A. Source

List of complaints from King Håkon VI against the Hanseatic ports [after 24 June 1370]: The second last of forty-one grievances runs as follows: 'Also, 10 ships came to Bergen, which set fire to our estate, and as they could not burn it down they broke it' (*NGL*, rk. 2, vol. 2, 619; cf. *RN*, vol, 7, 52).[23]

B. Commentary

The list of complaints referred to is later than a list dated to St John's Day 1370 (*RN*, vol. 7, 46 n. 1). The attack on Bergen must have taken place in 1369, during the war between King Håkon and the Hanseatic ports. The attackers obviously had little success in setting fire to the stone-built Royal Estate but it cannot be excluded that they managed to put some firemarks on it. The subsequent attempt to tear it down can hardly have succeeded more than partly (Munch 1852–63, part 2, vol. 1, 815–16; Helle 1982, 842).

9. 1393, 22 April

A. Sources

Icelandic Annals:

An entry under the year 1393 in *Gottskálksannáll* runs like this: 'Then there was good peace in Norway past Easter. After Easter Germans came in to Bergen with 18 large ships from Wismar and Rostock, the relatives of King Albrecht. They

went up inside of Nordnes on the day before Jón's Day, bishop of Hólar [23 April]. There occurred the greatest manslaughter, and the host came together in at the Brothers' [the Fransiscans]. There, Jon Darre was captured by the Germans and mortally wounded. They sacked all the churches in the town, and seized all the valuable property there was, and burnt the town of Bergen. The bishop and the lawman in Bergen were forced to swear oaths. They put Germans in charge of the Royal Estate and sailed away within 7 days' (*Isl. Ann.*, 368; cf. Storm 1898, 431).[24]

Flateyjarannáll gives an even more detailed but only fragmentarily preserved account of the German attack on Bergen in 1393, here dated to Thursday following the week after Easter [17 April]. But there is no information on the fire caused by the Germans (*Isl. Ann.*, 422–23; cf. Storm 1898, 431–32).

Detmar-Chronik:
An entry under the year 1392 has the following wording: 'In the same year the *Vitalienbrüder* won Bergen in Norway, and they devastated many other territories in Denmark' (*Chroniken*, vol. 26, 51).[25]

Draft of English complaint [1404]:
'Likewise, on the day before St George's Day in the sixteenth regnal year of Richard II [22 April 1393], several malefactors and robbers from Wismar and Rostock of the company of the Hansa arrived forcibly with a large navy in the town of Bergen in Norway, and won the same town by strong assault, and there took all the English merchants and their goods, and burnt their houses and lodgings, and held their persons to high ransom, as shown by the letters of safe-conduct they got, so that the damages and losses of the plaintiffs amount to 5400 nobles' (*DN*, vol. 19, 817; cf. Storm 1898, 435).[26]

Agreement between representatives of the English king and envoys of Hanseatic towns, 15 December 1405:
Here is repeated the complaint rendered above. But the attack of the Germans on Bergen is now dated to 1394, and the English losses are specified in greater detail: 'Namely, first, they burnt there 21 houses belonging to the said merchants, to the value of 440 nobles. Likewise, they took from Edmund Belyetere, Thomas Hunt, John Brandon and from other merchants of Lynn to the value of 1815 pounds' (*DN*, vol. 19, 837).[27]

Letter patent from King Henry IV, Westminster 15 February 1412:
The letter makes public in Latin a complaint the king has received in French from the merchants of Lynn trading on Bergen. The German attack on Bergen is now

dated to the fourteenth regnal year of Richard II [22 June 1390–21 June 1391]. The losses of the English merchants are again described, and valued at new sums. But nothing new is added on the fire caused by the Germans, except for the fact that papers worth one thousand pounds were lost in the burning English houses (*DN*, vol. 19, 926).[28]

Other sources:
There are quite a few other sources referring to the attack on Bergen in the 1390s, but they are of later dates than those rendered above and to a large extent clearly based on them. Thus, later German and Danish-Norwegian accounts of the attack are mostly derived, directly or indirectly, from *Detmar-Chronik* and partly distorted. This is not least the case with the information on the attack given by the Bergen humanists in the second half of the sixteenth century (Storm 1898, 428–40). As there is nothing new on the 1393 fire in these writings, their contents will not be rendered here.

B. Commentary

The written sources for the first attack of the *Vitalienbrüder* on Bergen have been thoroughly examined and their contents rendered and partly translated by Storm (1898). Because of later and distorted German chronicle entries under the year of 1395, Norwegian, Danish and German historians did for a long time assume that the German pirates attacked Bergen twice in the 1390s, first in 1392/93, secondly in 1395. But Storm demonstrates convincingly that one and the same event is the object of all the written accounts preserved, but misdated in later representations.

Gottskálksannáll and the English complaint of 1404 both of them date the attack to 22 April 1393. As the two accounts are mutually independent, this should be accepted as the correct date. *Gottskálksannáll* appears to base its entry on contemporaneous recordings. The primary informants may have been members of the crew of a ship that arrived from Bergen in western Iceland 12 June in the same year (Storm 1888, XXV; 1898, 431).

The *Vitalienbrüder* obviously burnt part of Bergen. But the destruction of several houses belonging to English merchants is the only written indication of the area affected by the fire. According to the agreement of 1405 21 houses worth 440 nobles were burnt down. The rather modest value may indicate that 'houses' were in this context not independent buildings but rather more or less connected constructions within one and the same urban tenement. When the extensive fire of 1413 occurred (see below No. 10) there existed a 'tenement of the English' (*Enskra manna gard*) in Bergen. In all probability, the English houses afflicted in 1393 belonged to the same tenement.

The 1413 fire broke out in the English tenement and spread from there to *Garpa strætid*, 'the street of the *garpar*', as the Germans were nicknamed in Bergen. This street name is not known from other sources but must have denoted a street dominated by Germans. This would either be Øvrestretet/Øvregaten or the so-called *Sutara streti* ('shoemakers' street'), also called *Skredderstretet* ('tailors' street'), running below the Upper Street along the inner part of Vågen. Both streets may have been connected with *garpar* because German craftsmen worked there (cf. Helle 1982, 250–51, 717–18). They were longitudinal thoroughfares, running roughly parallel with the shore and converging at St Olaf's Church, now belonging

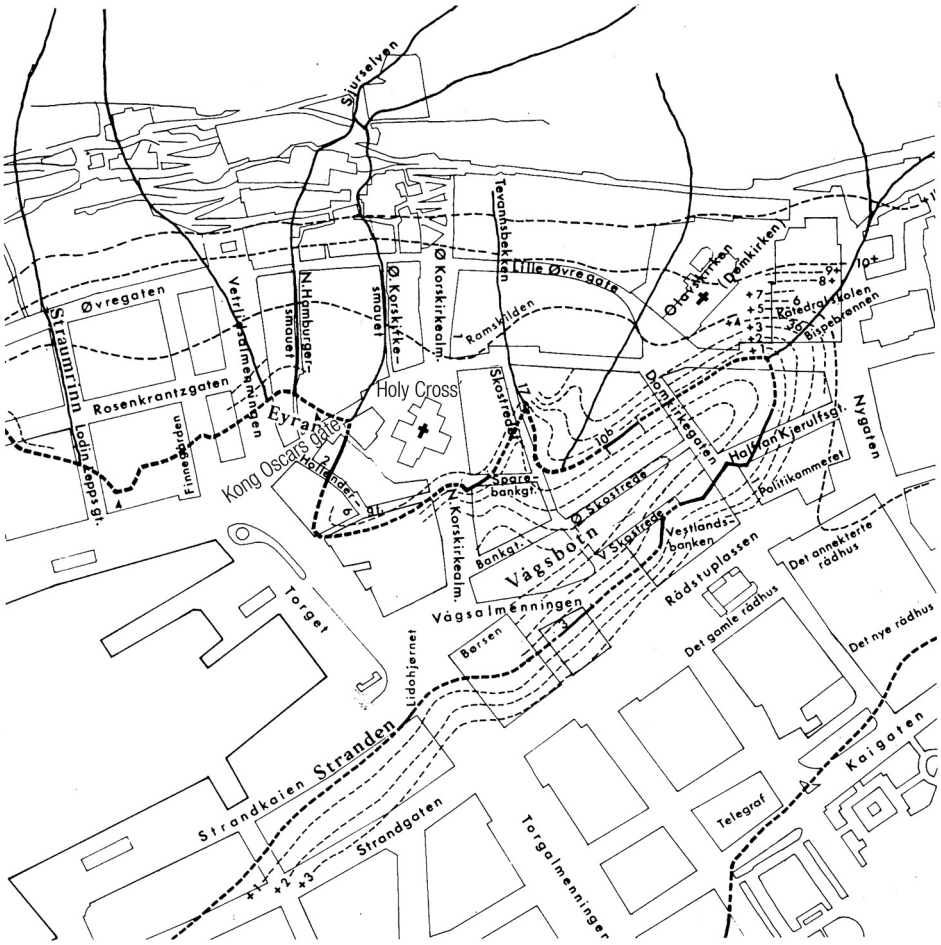


Fig. 9. Vågsbotn. The presumed natural topography of the area of Vågsbotn c. 1100 superimposed on the present-day street plan (after Helle 1982, p. 25).

to the Franciscans, at the head of Vågen. Øvrestretet is the preferable alternative (Nielsen 1877, 125), as seven churches were burnt down together with the whole of the street mentioned in 1413. That many churches were not to be found in the vicinity of the much shorter *Sutara streti*.

The tenement of the English was probably situated outside the Bryggen area dominated by the Hanseatic *Kontor* and should be sought somewhere in Vågsbotn, from where a fire might easily spread to Øvrestretet. This is supported by the tradition recorded by Bergen humanists in the second half of the sixteenth century. According to the anonymous author of *Bergens Fundas*, the English formerly had their abode in Vågsbotn (Sørlie (ed.) 1957, 81), and Absalon Pederssøn professes to know that *Hollender strede* ('street of the Dutch') in Vågsbotn was originally called *Engelsmend strede*, 'street of the English' (Storm (ed.) 1895, 31; cf. Lorentzen 1954, 92–93, 184–85). If correct, the last piece of information places the English tenement at the shore in the northern part of Vågsbotn, in front of the present-day Hollendergaten (Helle 1982, 250–51).

The probable existence of an English tenement i Vågsbotn leads to the conclusion that the *Vitalienbrüder* in 1393 set fire to at least part of that area, all the more so since this was also the area where the fighting took place. According to *Gottskálksannáll*, the Germans came on shore inside of Nordnes on the western side of Vågen. They must have moved on around the head of bay until they met the Norwegian defenders at the Franciscan House on the eastern side, in Vågsbotn.

The annals' statement that the Germans 'burnt the town of Bergen' would seem to indicate that a considerable part of the town was affected, but it does not necessarily mean that they burnt down the whole town. Presumably, they would shrink from setting fire to the Hanseatic tenements at Bryggen, belonging to their countrymen. Here, the mention of German firms in the tenements of Bredsgården and Einarsgården in 1395 has been interpreted as to indicate that at least part of Bryggen was spared (Lorentzen 1954, 92). But activity in Bryggen tenements in 1395 does not strictly preclude a fire in 1393, and one must consider the possibility that the fire may have spread by accident to the Bryggen area along Øvrestretet, as was later the case in 1413.

To sum it up, the extent of the 1393 fire cannot be defined from written evidence, apart from the fact that it afflicted the English tenement that was probably situated in the outer, northern part of Vågsbotn. It was probably more than just a local fire, but it must be left to the archaeological research to establish how far it reached.

10. 1413, 29 October

A. Sources

Lǫgmannsannáll:

An entry under 1413 runs like this: 'Town fire in Bergen two nights before All Saints' Day [29 October]. The fire came first in the tenement of the English, from there in the street of the *garpar*. It burnt up all of it, and 7 churches with it, and the Apostles' Church' (*Isl. Ann.*, 290).[29]

Gerens Chronik:

'Anno 1414 the English burnt down the town of Bergen' (Bruns 1900, 349).[30]

Entry in the Lübeck Niederstadtbuch about 15 July 1414:

The entry records the purchase of 'one living room, two storerooms, loft and bedroom, and all parts pertaining to the above mentioned houses in the common room and the cookhouse, situated in the tenement of Finnegården in Bergen' *(HansUB*, vol. 5, No. 1137).[31]

B. Commentary

The factual description of the fire in *Lǫgmannsannáll* inspires confidence, all the more so as it has been handed down in what appears to be a direct transcript of a contemporaneous recording (Storm 1888, XXII–III).

Geren's entry on the fire was probably based on what he had heard or read as the secretary of the Bergen *Kontor* in the 1450s. As he had no first hand knowledge of the fire in question, we should not accept at face value the allegation that it was the English who burnt down the town. There was probably no other basis for this assertion than the fact that the fire started in the English tenement and spread from there.

Generally, *Lǫgmannsannáll* must be considered more reliable than Geren's chronicle in this matter, and 1413 should thus be preferred to 1414 as the year of the fire. But the matter is complicated by the fact that *Lǫgmannsannáll* has no entries expressly referring to 1414. In view of this, it has been argued that the collection of entries under 1413 should be divided into two, so that the last part, containing the account of the Bergen fire, would refer to 1414 (Storm 1898, 436, n. 2), in accordance with the date given by Geren. This would be a satisfactory explanation but for the fact that the entries in question end by recording an event which undoubtedly occurred in 1413: the death of Bishop Jón of Skálholt (*DN*, vol. 17 B, 266). As *Gottskálksannáll* records it, the fire then probably belongs to 1413. Consequently, this date should be preferred to that of 1414.

It has already been shown that the English tenement in which the fire started, was in all probability situated in Vågsbotn, and that the street of the *garpar* along

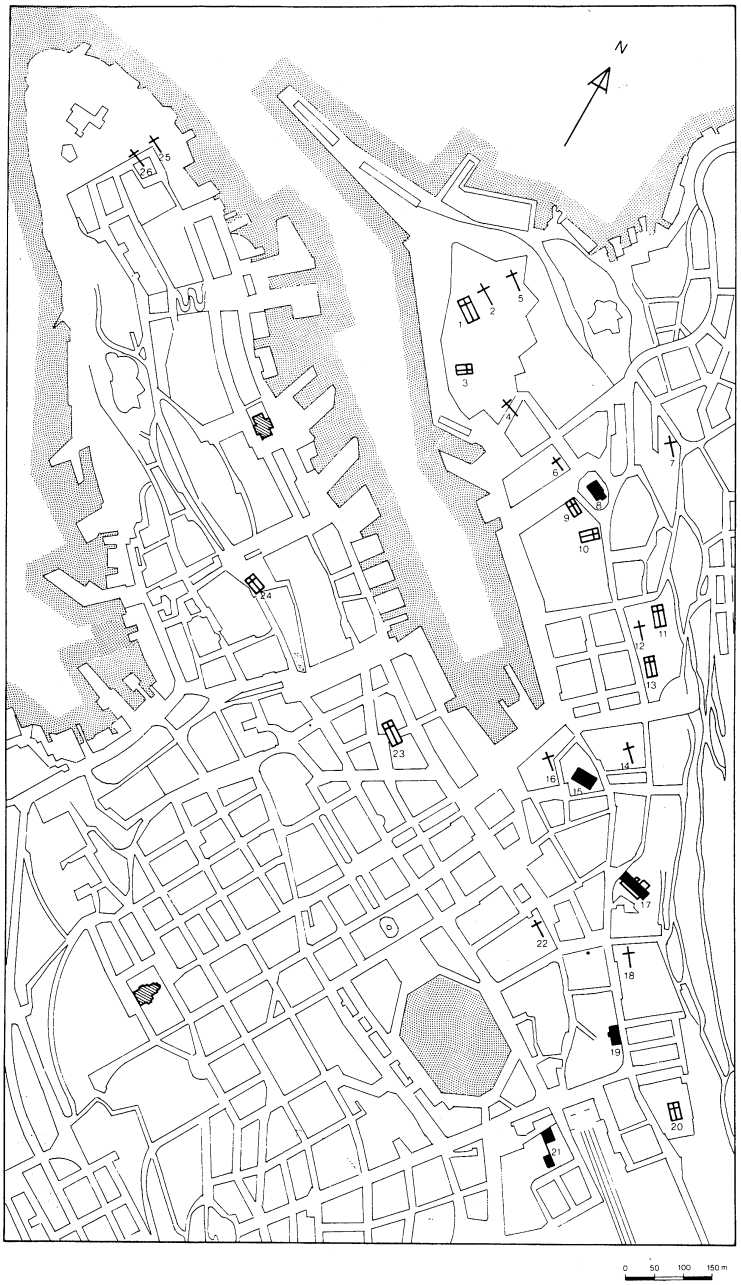


Fig. 10. Map of existing and vanished churches in Bergen (after H.E. Lidén): ***1*** *Christ Church Cathedral,* ***2*** *Small Christ Church,* ***3*** *the first (early 12th century) and second (1247) Apostles' Church,* ***4*** *the third Apostles' Church (built 1274–1302),* ***5*** *St Olaf's of the Dominicans,* ***6*** *the first St Catherine's (before 1248),* ***7*** *St Olaf's on the Hill,* ***8*** *St Mary's,* ***9*** *St Lawrence',* ***10*** *St Peter's,* ***11*** *St Nicholas',* ***12*** *St Columba's ('the Stone Church'),* ***13*** *St Martin's,* ***14*** *St Hallvard's,* ***15*** *Holy Cross',* ***16*** *St Michael's in Vågsbotn,* ***17*** *St Olaf's in Vågsbotn (church of the Franciscans after 1248, present-day Cathedral of Bergen),* ***18*** *the second St Catherine's (before 1276),* ***19*** *St George´s (hospital),* ***20*** *St Jacob´s,* ***21*** *St Mary´s of the nunnery of Nonneseter,* ***22*** *All Saints´,* ***23*** *St John´s of the Augustinians,* ***24*** *St Michal´s of the Benedictines of Munkeliv,* ***25*** *St Paul´s,* ***26*** *St Margaret´s on Nordnes.*

Fig. 11. Presumed extent of the 1413 fire (after A. Christensson 1988). It cannot be established from written sources that the fire spread north of Veisan, as indicated on the map. It may also have affected a larger part of the area of Vågsbotn than indicated.

which the fire spread, must have been Øvrestretet/Øvregaten (above No. 8). *Gottskálksannáll*'s assertion that the whole street was burnt tallies with its statement that seven churches were afflicted. St Michael's Church in Vågsbotn was probably one of the seven; it was apparently standing close to the English tenement where the fire broke out. In 1440 the bishop of Bergen referred to it as destroyed several times by fire, and transferred its community to St Hallvard's Church in the same area (*No. Mag.*, vol. 1, 569; cf. Helle 1982, 578; Lorentzen 1954, 92–93). Along Øvrestretet from the northern part of Vågsbotn and southward were situated St Hallvard's, St. Martin's, the Stone Church (St Columba's), St Peter's, and St Mary's; these would be the most likely ones to have burnt 'with' the street. If we add the Church of the Holy Cross, standing close to the probable situations of St Michael's and the English tenement, we would have the seven churches purported to have burnt south of Holmen in 1413. However, we cannot safely exclude the churches of St Nicholas and St Lawrence, none of them far from Øvrestretet. And the fire may have spread south of the Holy Cross', to the Fransiscans' St Olaf's Church at the inner end of Øvrestretet (cf. Lorentzen 1954, 92–93; Helle 1982, 699).

In the north, the fire reached the Apostles' Church, the royal chapel erected at the southern edge of Holmen (cf. Helle 1982, 550, 875), but probably not much further, as there is no indication that the Royal Estate or the Christ Church cathedral were affected.

The extent of the fire, from the English tenement in Vågsbotn to the Apostles' Church at Holmen, and the destruction of eight churches makes it clear that this was a real conflagration. But the purchase in 1414 of specified houses and rooms in the *Kontor* tenement of Finnegården, close to the southern edge of Bryggen (cf. Helle 1982, 231, 244), should serve as a warning against assuming that the whole town east of Vågen was completely burnt down. It is of course possible that the tenement was rapidly rebuilt. But it is also possible that at least part of it was spared and that this was also the case with other tenements. The fact that *Gottskálksannáll* focuses on Øvrestretet and the churches destroyed there, supports the conclusion that the fire was most destructive along that street.

11. 1429, 1 April

A. Sources

Lübeck chronicles:

Hermann Korner, in his *Chronica novella,* and the so-called *Rufus-Chronik* relate that the *Vitalienbrüder* under the leadership of Bartolomeus Voet attacked Bergen with seven ships and 400 men on Friday after Easter [1 April] 1429. People in Bergen had been warned of the danger and had taken up positions in the estates of

the king and the bishop. During the fight that followed, Bartolomeus Voet was informed that a large force was sailing at the rescue of the town. He put out against the Norwegian fleet and defeated it completely. When he returned to Bergen, his force had been strengthened by ten ships from Wismar. The defence of the town had now been abandoned. The *Vitalienbrüder* sacked the houses of the Norwegians and brought all the valuables they could find to their ships (*Chroniken*, vol. 28, 312–15; cf. Helland 1916, vol. 1, 214–18).

The *Rufus-Chronik* adds: '... then they set fire to the royal estate and the bishop's estate and burnt them down to the ground; by the same fire did also burn many houses belonging to the citizens and the Merchant [the *Kontor*]' (*Chroniken*, vol. 28, 315).[32]

The two extant editions of Hermann Korner's *Chronica novella* profess to know that 'about all the town' (KD) or 'most of the town' (KH) was burnt down together with the estates of the king and the bishop (ibid. 315, n. 2).[33]

Gerens Chronik:
'Anno 1429 the Danes burnt down Bergen' (Bruns 1900, 349).[34]

Bergens Fundas:
The author mentions the war between King Erik of Pomerania and the towns of the Hansa, and gives an account of the ensuing German attack on Bergen without dating it: 'Twice in one summer they came here to Bergen. And here they plundered and burnt the town. And they killed many of the burgesses. Here was also lying four English ships on Vågen, carrying out their trade. They also attacked them, took them away from here, and plundered them pitiably. By this piracy and fire the burghers of Bergen have been greatly shocked and impoverished ...' (Sørlie (ed.) 1957, 48).[35]

Absalon Pederssøn, Om Norgis Rige:
'Another *datum* I find in some Latin verses on 1429, that the churches and monasteries of Bergen would have been burnt by the German robbers ... The verses run like this:

In the year 1429
the temple of Bergen was burnt by pirates'
(Storm (ed.) 1895, 104).[36]

B. Commentary

As a consequence of the war between King Erik of Pomerania and the Hansa 1426–32 the *Kontor* in Bergen was closed down and left by the Germans for the

years 1427–32. In the course of this period Bergen was attacked three times by the *Vitalienbrüder*: in 1428, 1429, and 1432 (Helle 1982, 700).

The first attack, in the spring of 1428, is described in the Lübeck chronicles together with that of 1429. The town was plundered, notably the Bishop's Estate, after the bishop had fled together with English ships lying on Vågen with fish cargoes. The attackers also took the fish that had been brought from the North for the annual fair in Bergen. But there is no mention of the burning down of any buildings in the town, as was the case the next year (*Chroniken*, vol. 28, 301–3; cf. Bendixen 1912, 358–60).

The third and last attack, that of 1432, is only known from short mentions in two letters from the mayor and council of Danzig 1432 (ed. Bull 1925, 129–31). As this event did not attract the attention of the Lübeck chroniclers, it was probably of minor importance as compared to the attacks of 1428 and 1429, and there is no indication that any fire occurred.

There is thus only evidence for a fire in connection with the second attack, that of 1429. There are no other sources independent of *Rufus-Chronik* and Herman Korner's *Chronica novella* for this event. Their accounts were probably based on a now lost version of *Chronica novella* (cf. above p. 19), covering the period up to 1430. In the 1420s Korner recorded events contemporaneously. He went on compiling new versions of his chronicle, bringing it further up in time, at the same time tending to rewrite and change his earlier versions. In principle, one should therefore always keep to the oldest preserved version of his chronicle. As Korner's lost original account of the year 1429 was retold by *Rufus-Chronik*, this chronicle becomes a primary source. But its author was recasting his sources, and it is difficult to know how faithfully he renders the contents of Korner's lost account (Koppmann 1899, V–VI; 1902, XI–XX).

In practice, one can be fairly certain that information shared by all the three chronicle versions in question was derived from the contemporaneous and now lost Korner version. The statement that the *Vitalienbrüder* set fire to the estates of the king and the bishop on Holmen in 1429 should thus be trusted, though the stone-built Royal Estate, whose medieval constructions are partly still standing, cannot have been burnt down to the ground.

As regards the further extent of the 1429 fire, there are certain differences between the three extant chronicle versions. Whereas *Rufus-Chronik* reports that several houses belonging to the citizens of Bergen and the Hanseatic Merchant were afflicted, the two Korner versions makes the fire more generally extensive: 'about all the town' or 'most of the town' was burnt down. The slightly more detailed and factual account of *Rufus-Chronik* should probably be preferred. In that case, Bryggen tenements belonging to the *Kontor* as well as tenements

possessed by Norwegians outside Bryggen were affected. The statement that 'many houses' (*vele hus*) were burnt down, indicates that the fire was extensive but perhaps not as extensive as suggested by the two Korner versions. We should keep in mind that the chroniclers generally tended to exaggerate their accounts of dramatic events.

Gerens Chronik is based on earlier Lübeck chronicles, but its author also had access to local Bergen tradition. His entry, then, lends some support to the assertion that Bergen was hit by a quite extensive fire in 1429, even if he blames the Danes for having caused it. Would this be a local *Kontor* tradition, aiming at escaping the blame that was put on the Hansa for the attack of 1429?

It is difficult to decide whether any independent source value should be ascribed to the sixteenth century tradition recorded by the anonymous author of *Bergens Fundas* and Absalon Pederssøn. They must have made use of the Lübeck chronicles and/or later writings based on them, but they also built on local Bergen tradition, and we know that they had access to some written material that has now been lost. The Latin verses quoted by Absalon Pederssøn is one example of this. The 'temple of Bergen' there reported to have burnt, was probably the Christ Church cathedral, close by the estates of the king and the bishop. The possibility cannot be excluded that it was affected by the fire.

We may conclude that a considerable part of Holmen as well as parts of the Bryggen area and the rest of the built-up town were affected by the 1429 fire, but the areas that were hit apart from Bryggen and Holmen cannot be defined on the basis of written evidence. Nor do we know how extensively the Bryggen area was affected.

12. 1454

A. Source

Gerens Chronik:

Under the year 1445 Geren reports: 'Then burnt Straumen in Bergen' (Bruns 1900, 354).[37]

B. Commentary

As Geren was the secretary of the Bergen *Kontor* in the 1450s and the Bryggen tenement of Straumen was situated not far from the administrative centre of the Kontor, The Merchant's House (Kjøpmannsstuen) on Breida-allmenning (cf. Helle 1982, 711–12), Geren's chronicle must be considered a trustworthy source for what appears to have been a local fire in one tenement.

We have already seen that the conflagration of 1248 started in Straumen (Straumrinn), by *Hákonar saga* placed roughly in the middle of the town east of Vågen (above No. 5). Two documents from 1349 announce economic transactions

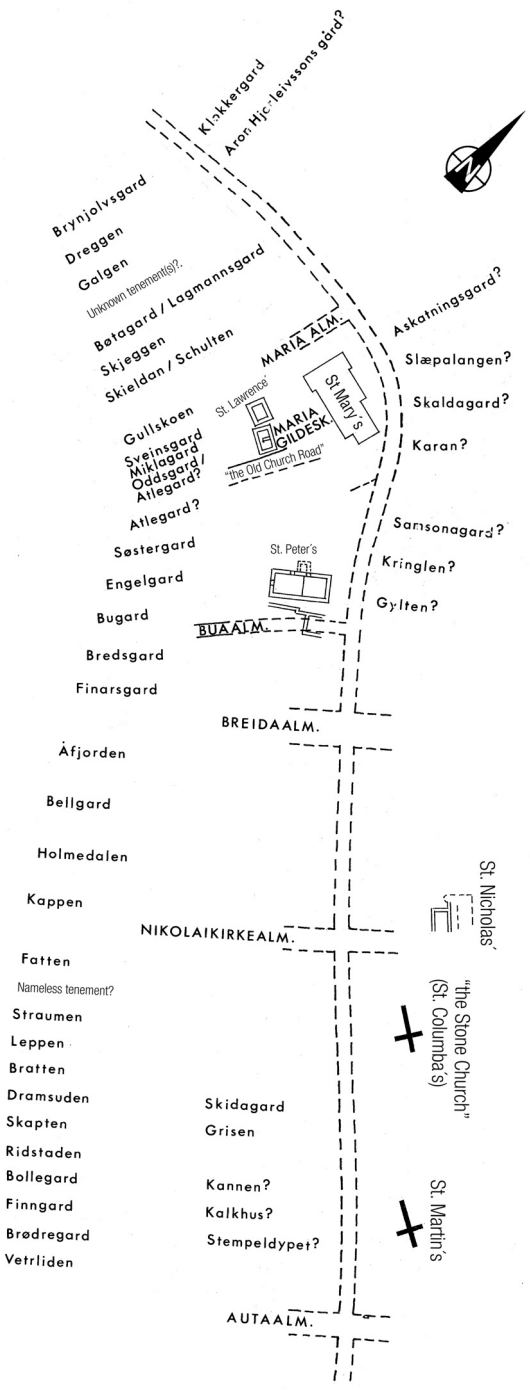


Fig. 12. The Bryggen tenements. The names and order of tenements at Bryggen in the first half of the fourteenth century as established by the author (Helle 1982, 228–49).

agreed upon 'in the common room in the outer part of Straumen' (*DN*, vol. 5, No. 206; vol. 3, No. 265),[38] which shows that Straumen was at that time a 'double tenement' consisting of two rows of houses with a common passage in between (cf. Helle 1982, 220–22). There is no other written information on Straumen.

Koren Wiberg was of the opinion that the tenements of Solegården (first mentioned 1484 – Bruns 1900, 124) and Revelsgården (first mentioned 1460 – Bruns 1900, 173), both of them broad 'single tenements' with only one row of houses each, were erected on the site left open after the destruction of Straumen by fire in 1454: Solegården in the northern and Revelsgården in the southern part of the site. His strongest argument was that a small stream from the mountainside was running through Revelsgården to the sea in 1558 and 1725, and that this was the 'stream' that had given rise to the name of Straumen (Koren Wiberg 1920, 126–30).

The local historian Bernt Lorentzen disagreed partly with Koren Wiberg, assuming that the broad single tenement of Revelsgården did alone occupy the earlier site of Straumen.

He based his argument on the fact that Revelsgården appears in the sources in 1460, whereas Solegården is not mentioned until after the conflagration of 1476 (below No. 14). Solegården, Lorentzen assumed, was the successor of the tenement of Fatten, burnt in 1476 (1954, 140–41).

However, Lorentzen overlooked the fact that Fatten's site was deliberately left open after the 1476 fire (*NGL*, rk. 2, vol. 2, 687; cf. below No. 15) and that a document from 1562 places it, with exact measures, between the Merchant's House on Breida-allmenning and Solegården (Koren Wiberg 1926, 30–319; cf. Helle 1982, 237). Thus, Solegården cannot have been the successor of Fatten. Moreover, there is already in 1447 mention of a *Renegarden* in Bergen (Bull 1927, 200) which may be identical with Revelsgården. In that case, Revelsgården existed before Straumen was burnt down in 1454, so that it cannot directly have succeeded Straumen.

The medieval topographic situation south of Breida-allmenning is difficult to grasp from written evidence, as the boundaries of the tenements were obviously rearranged after the destructive conflagration of 1476 (cf. below No. 15). This makes it rather futile to seek solutions on the presumption that tenements after 1476 were direct successors of tenements existing in advance. The evidence which has so far been established, suggests that Straumen may have been situated south of Fatten, the tenement adjacent to Breida-allmenning in the south. Here, excavations have uncovered two rows of houses that may have belonged to a double tenement (Helle 1982, 241–42). This site was later occupied by Solegården, for a lesser part also by Revelsgården. But it is also possible that Straumen occupied the adjacent site to the south, later belonging partly to Revelsgården but mostly to the tenement of Leppen, which appears to have been allotted a particularly broad site after the fire of 1476. The latter situation would bring Straumen closer to the stream mentioned by Koren Wiberg (Helle 1982, 710). However, the exact course of this stream has not been documented, and it may have been regulated and changed over the years. Nor can it be excluded that another stream was running down further north.

Thus, the exact position of the double tenement of Straumen, burnt in 1454, cannot be established from written evidence. But its situation roughly in the middle of the town east of Vågen suggests that it was standing not far from the central Breida-allmenning, containing the town hall, wine cellar and market place of Bergen. In this area there was room for it as the second or third tenement to the south of the allmenning.

13. 1455, 1 September

A. Sources

Letter of complaint, Bergen, 30 September [1455]:
The letter was issued by Elisa Eskilsdatter, widow of the captain of Bergen Castle, Olaf Nilsson. She relates how her husband, her son, the bishop of Bergen and others were killed in the monastery of Munkeliv where they had sought refuge from hostile German merchants and sailors on St Egidius' Day [1 September]: '... then all the common merchants sought after them with all their might and at once set fire to the monastery and burnt it down to the ground ...' (*DN*, vol. 3, No. 830).[39]

Letter of complaint [Copenhagen, about 25 July 1477]:
The letter was issued by Olaf Nilsson's son, Aksel. It repeats that the monastery of Munkeliv was burnt down by the Germans: '... and so they burnt that monastery down to the ground' (*DN*, vol. 7, 485).[40]

Gerens Chronik:
Under the year 1455 Geren gives an account of the German attack on Olaf Nilsson and his followers. The bishop of Bergen, Olaf's son, and other followers were killed in the church of Munkeliv, 'and it was set fire to and burnt down on St Egidius' Day' (Bruns 1900, 355).[41]

Lübeck Ratschronik:
Under the year 1455, the chronicle describes in detail the dramatic events that had taken place in Bergen. Olaf Nilsson sought refuge in the tower of the church of Munkeliv: '... therefore, they set fire to the tower and burnt it, and by that fire the whole monastery burnt' (*Chroniken*, vol. 30, 190).[42]

B. Commentary

The accounts given by both parties in the conflict leave no doubt that the church and monastery of Munkeliv was burnt down by the Germans under the attack on Olaf Nilsson and his followers 1 September 1455. Several other sources tell the same story, but the ones rendered here are more than sufficient for documenting the fire. There is no indication that the fire spread from the monastery to the built-up area below, on the western shore of Vågen.

14. 1464

A. Sources

Letter from the Franciscan convent of Bergen, 14 October 1464:
The Franciscans of Bergen impart to the mayor and council of Lübeck 'the

deplorable tiding of the pitiable fire of our poor monastery in Bergen' (*DN*, vol. 7, No. 463; *HansUB*, vol. 9, No. 133).[43]

Edvardsen's description of Bergen:
'Anno 1463. The monastery of the Greyfriars was burnt down' (Brattegard (ed.) 1951, 65).[44]

B. Commentary

The original letter from the Franciscans has survived, and there is no reason to doubt that their house was burnt down. As the letter was written 14 October 1464, the fire probably occurred earlier in the same year. The year of 1463, recorded by Edvardsen in the seventeenth century, seems a less probable date. The Franciscans would hardly have been that late in informing the council of Lübeck and asking for its help.

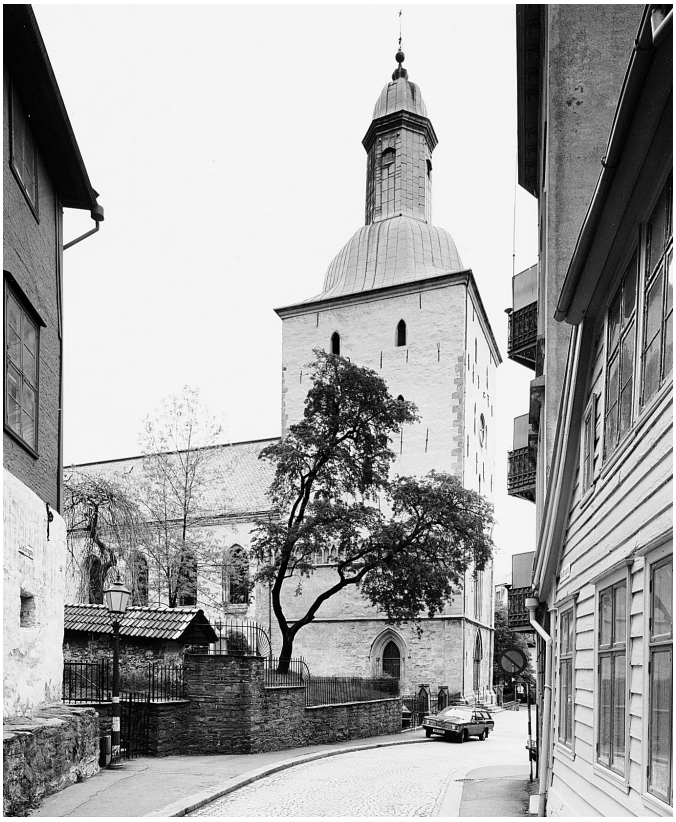


Fig. 13. St. Olaf's of the Franciscans. Most of St Olaf's of the Franciscans, the present-day Cathedral of Bergen, was rebuilt, as it is seen from the north today, after the fire of 1248, including the 'forehall' which is now the base of the early eighteenth-century tower. The priory which burnt in 1464 was situated south of the church.

15. 1476, 10 September

A. Sources

Letter from the German Merchant of Bergen to Rostock, 9 October 1476:
The letter informs the mayor and councillors of Rostock of the difficult situation of the Germans of the *Kontor* after the fire that has occurred in Bergen, and asks for help: 'On the day before the Day of Prothus and Jacinthus [10 September] Bryggen burnt down and some of the houses and churches of the Norwegians. Because of that the Merchant is in great worry, lodging with the Norwegians on Stranden in quite a grim situation' (*Hanserecesse*, Abth. 2, vol. 7, No. 415).[45]

Gerens Chronik:
An entry under the year 1476 runs like this: 'Towards the night of Tuesday after *nativitas Mariae*, on the day of 10 September, Bergen in Norway was burnt of its own fire, from the Apostles' Church to the Shoemakers' and Tailors' Street with the Church of the Holy Cross. Nothing was saved. It happened by incautiousness in Vetrliden on the part of the inmates Brun and Hans Kalweswinckel. Innumerable property, fish, etc. were burnt from midnight to vesper time [evensong].

Afterwards, the merchants came to an agreement with the counsellors of the realm, who owned the sites, and built in accordance with the agreement 13 ells´ storerooms and lofts, not higher. And three sites stand open; for them the Merchant shall pay rent' (Bruns 1900, 368–69).[46]

Lübeck Ratschronik:
An entry under the year 1476 runs as follows: 'Likewise, in the same year burnt in Bergen the Merchant's firms or quarters, and great damage was done, as there was much fish in the houses, which was there burnt together with chests, beds, and all domestic utensils. Not half of it was saved, as that fire broke out at midnight when everyone had gone to bed. The blame for having caused this damage is ascribed to a merchant called Hans Kalveswinckel, whose quarters did first start burning, and there his apprentice was burnt to death, and that was caused by drunkenness. This Hans used to stay up far into the night, and was often asked by the aldermen and his neighbours to see to it that no damage arose because of him when he was animated. But he brushed it away arrogantly. Because of that the Merchant was so much more discontented with him. Likewise, when this damage happened, a loafer among the Greyfriars, who used to go here and there both day and night, so that it was complained about it to the guardian, spoke like this: 'The Germans have drawn me into this bad thing, but they have themselves to draw it out [bring it to an end?].' Therefore, the Merchant brought the Greyfriar to court about what he was concealing in the case, and they found him – so some of the foremen say – in

possession of incendiary material, that is fuse. That was charged, but how it was judged one does not yet know' (*Chroniken*, vol. 31, 169–70).[47]

Announcement, 13 December 1476:
Bishop Hans of Bergen and the captain of Bergen Castle, Jon Smør, make public that the case against the Franciscan brother Ebbe who had been walking about in the night of the fire, has been settled, at the request of the brothers of his order, by his release and his banishment from Norway (*HansUb*, vol. 10, No. 515).

Provisions for the rebuilding of Bryggen after the fire:
Such provisions are preserved in two *extracts* published by Koren Wiberg. For one thing, houses shall not be built higher than thirteen ells from the ground to the loft (Koren Wiberg (ed.) 1926, 29).

A *recess* from a Hanseatic diet in Lübeck 1 June1480 refers to a letter from the aldermen of the Merchant of Bergen 'with a recess containing how and in what way the Merchant there in Bergen thought to rebuild. On this, the aldermen asked to have an open, sealed letter from the towns' (*NGL*, rk. 2, vol. 2, 262).

Entry in the Lübeck Niederstadtbuch, 17 March 1480:
The *Bergenfahrer* Hans Kalveswinckel promises the council of Lübeck and representatives of the Wendic towns to answer with all his property for the next Hanseatic diet regarding the fire that started in his house (Bruns 1900, 368 n. 9).

Announcement, 18 October 1487:
Bishop Hans, lawmen, and councillors in Bergen make public that the German aldermen and merchants in town have announced 'that because of [the danger of] fire they would leave open some sites so that there would be room between the tenements, so that if, God forbid, fire would break out, they would better be able to quench it, so that Bryggen would not at once burn everywhere' (Koren Wiberg (ed.) 1926, 30).[48]

Regulations for the German Merchant in Bergen, 1494:
'So is desired and considered as good because of fire's distress, that the below mentioned sites should be left free, unbuilt, and unencumbered, namely, Miklagard and half of the site to the north and half of Kappen to the south, the whole of Fatten, and the whole of Skapten' (*NGL*, rk. 2, vol. 2, 687).[49]

B. Commentary

The conflagration of 1476 is well documented. *Gerens Chronik* was recorded contemporaneously. Geren was now in the service of the *Bergenfahrer* in Lübeck and well acquainted with events in Bergen. In 1477 he took part in the embassy from the Wendic towns to negotiations with King Christiern I in Copenhagen (Bruns 1900, 321–25, 334–37). The entry on the fire in the *Lübeck Ratschronik* was obviously recorded before the spring of 1477 (Bruns 1910, XIX–XX). The information given by the two chronicles is supported by records from 1476 and the next couple of decades.

The fire broke out in the tenement of Vetrliden, close on the northern edge of Bryggen (cf. Helle 1982, 707, cf. 231, 244), at midnight before 10 September 1476. Geren largely describes the extent of the fire: from the Apostles' Church on the southern edge of Holmen southward to the Shomakers' and Tailors' street (Sutara streti/Skredderstretet – above No. 8) in Vågsbotn, the present-day Kong Oscars gate, at least so far south that the Church of the Holy Cross was burnt.

The chronicle descriptions of the fire leave the impression that the German area of interest on Bryggen was very heavily afflicted. This is supported by the letter of 9 October from the Merchant of Bergen, reporting that the Germans now had to lodge with the Norwegians on Stranden west of Vågen, and were in a very grim situation. We have seen that the fire broke out on the southern edge of Bryggen. Further north, the sites left open in order to protect against similar total fires in the future bear witness to the destructive power of the 1476 conflagration: Skapten in the southern part of Bryggen, Fatten on the southern side of Breida-allmenning, Miklagard close on Maria-allmenning, and an indefinite 'site to the north'. The last mentioned site may have included the four northernmost tenements standing on Bryggen before the fire; they were apparently never rebuilt (Helle, 706, cf. 231, 236–43).

In addition to the German tenements on Bryggen several houses and churches belonging to the Norwegians were burnt down, which probably means that not only the area south of Bryggen, in Vågsbotn, but also buildings behind Bryggen, above Øvrestretet, were affected. Beside the Apostles' Church and the Church of the Holy Cross, both of them explicitly afflicted, the following churches were situated within reach of the fire: St. Olaf's on the Hill, St Mary's, St Lawrence', St Peter's, the Stone Church (St Columba's), St Nicholas', St Martin's, and St Hallvard's. There is no mention of St Lawrence' after 1476 (last mentioned 1438 – Bruns 1900, 70), nor of St Columba's (last mentioned 1427 – ibid., 59). Both of them may have ceased to function as places of worship after the 1476 fire, if they had not been shut down at an even earlier date (cf. Helle 1982, 859–62).

Fig. 14. Presumed extent of the 1476 fire (after A. Christensson 1988)

16. 1489

A. Sources

Bergens Fundas:
'Anno 1489 burnt the whole of Stranden by damaging fire to the Monastery (var.: the Shoe Street)' (Sørlie (ed.) 1926, 60).[50]

Edvardsen's description of Bergen:
'Anno 1489 the whole of Stranden burnt down out to the Monastery and in to the Shoe Street' (Brattegard (ed.) 1951, 65).[51]

B. Commentary

Contemporary and detailed information on this fire is lacking, and the source of the author of *Bergens Fundas*, writing in 1559–60, is unknown. Yet, the mention of the fire is too factual to be rejected. But its date and extent may of course be inaccurately rendered in a source as late as *Bergens Fundas*.

Edvardsen could hardly make use of a more primary source than *Bergens Fundas* when writing in the seventeenth century, so that no independent source value can be ascribed to him in this matter. When mentioning the Monastery, that is Munkeliv, and Skostredet ('the Shoe Street') in Vågsbotn (cf. Helle 1982, 716–20) as the extreme boundaries of the fire he may just be combining the two different boundaries mentioned in the variants of *Bergens Fundas*.

This is the first major fire mentioned at Stranden, the western shore of Vågen. The year of 1489 in *Bergens Fundas* should be preferred to that of 1487 given by Edvardsen, but, as already stated, this is no certain date.

17. 1527, 11–12 February

A. Sources

Schüttungsrechnungsbuch of the Lübeck Bergenfahrer:
Among the memorable events recorded in the years 1520–27 is a fire in Bergen: 'Likewise, anno 1527 five tenements have been burnt down in Bergen, namely, Gullskoen and the Small Svensgården and 'Stwengarden' and Bremergården and Skjeggen. And not a post in these five tenements was left standing. And there Jacob Kastensen was burnt to death in a firestorm and heat; he was the mate of Claus Fyncke, and had sailed from Lübeck with winter beer. And it happened at midnight and it dit not last more than three hours. And the fellows from Bryggen did great work in that fire when they provided Søstergården with sheets and wetted them. And it started to burn in Gullskoen, and that was caused by their own fire, and they were drunk and loaded in the tenement. And that happened Monday night before Tuesday after Appolonia's Day [11/12 February] in the year 1527' (Bruns 1900, 394).[52]

Bergens Fundas:
'Anno 1527 burnt Gullskoen, a tenement on Bryggen' (Sørlie (ed.) 1957, 65).[53]
This is repeated by Edvardsen (Brattegard (ed) 1951, 65).

B. Commentary

The fire on Bryggen the night between 11 and 12 February 1527 is reliably described and demarcated in the contemporary account of the *Schüttungrechnungsbuch* of the Lübeck *Bergenfahrer* (cf. Bruns 1900, 343–44). The author of *Bergens Fundas* hardly had access to that source, so that his entry on the fire confirms, independently, the more detailed account of the *Schüttungsrechungsbuch*.

The fire broke out in the tenement of Gullskoen in the northern part of the Bryggen area, and obviously spread from there to four neighbouring tenements. Among these, the name of *Stwengarden* (Bruns' reading) has created difficulties. The handwriting of the *Schüttungsrechnungsbuch* is ambiguous on this point, and Koren Wiberg would alternatively read *Stweg Gard* for *Dreg-gard*, that is the tenement of Dreggen (1908, 7). But Lorentzen is probably right in keeping to Bruns' reading as a slightly distorted form of Svensgården. This is supported partly by the mention of the Small Svensgården (*de Klene Swensgarden)* in connection with the disputed name, partly by a document from 1563 stating that 'the inner Gullskoen ... was in days of old called Svensgården' (Koren Wiberg 1926, 36),[54] and partly by the fact that two different tenements on Bryggen by the name of Svensgården were paying tax in 1522 (*NRJ*, vol. 3, 635, 639). One of them was obviously standing on the same site as does Svensgården today, the third tenement north of Nikolaikirkealmenningen. The other Svensgården is in 1522 mentioned between Søstergården, saved in 1527, and Bremergården, burnt down in the same fire, which would seem to indicate that there was also a tenement of Svensgården in the area afflicted by the 1527 fire. Lorentzen may be right in assuming that this tenement, together with the Small Svensgården, constituted a double tenement. This is supported by the analogy with the former Small Galgen and Galgen further north (Lorentzen 1954, 94–95, 104–7, 121–22; cf. Helle 1982, 230–40).

More hypothetical is Lorentzen's assumption that the northern Svensgården was moved in two stages to the site of the present Svensgården further south, after the fires of 1476 and 1527 respectively. And when he places the northern Svensgården *north* of Gullskoen (Lorentzen 1954, 121–22) he leaves out of account the fact that the above mentioned document of 1563 explicitly states that it was the Inner, that is *Southern*, Gullskoen that had at this time come to occupy the former site of Svensgården, probably as a consequence of the rebuilding after the fire of 1527. The Svensgården that burnt in 1527 should then be placed on the southern side of the Gullskoen that was destroyed by the same fire. This Gullskoen was

presumably situated in the broad present-day thoroughfare of Dreggsalmenningen, leading up from the sea north of Bryggens Museum and St Mary's Church.

When Gullskoen was rebuilt after the 1527 fire, it was apparently moved southward, into the site of the former Svensgården, which was not rebuilt; nor was the Small Svensgården, presumably on its southern side. Later, after the fire of 1702, Gullskoen was moved even further south. The two other tenements burnt in 1527, Bremergården and Skjeggen, appear to have been situated north of Gullskoen. They were not rebuilt, so that Gullskoen was after 1527 the northernmost Bryggen tenement.

The northern boundary of Bryggen was then in the late Middle Ages moved southward in two stages. After the fire of 1476 'the site to the north', probably including four tenements, was left open (above No. 15). Then, as a consequence of the fire of 1527, disappeared Skjeggen and Bremergården north of Gullskoen (Helle 1982, 230–35).

To the south of Svensgården and the Small Svensgården the tenement of Søstergården escaped the 1527 fire. This was probably not only due to the efforts of the

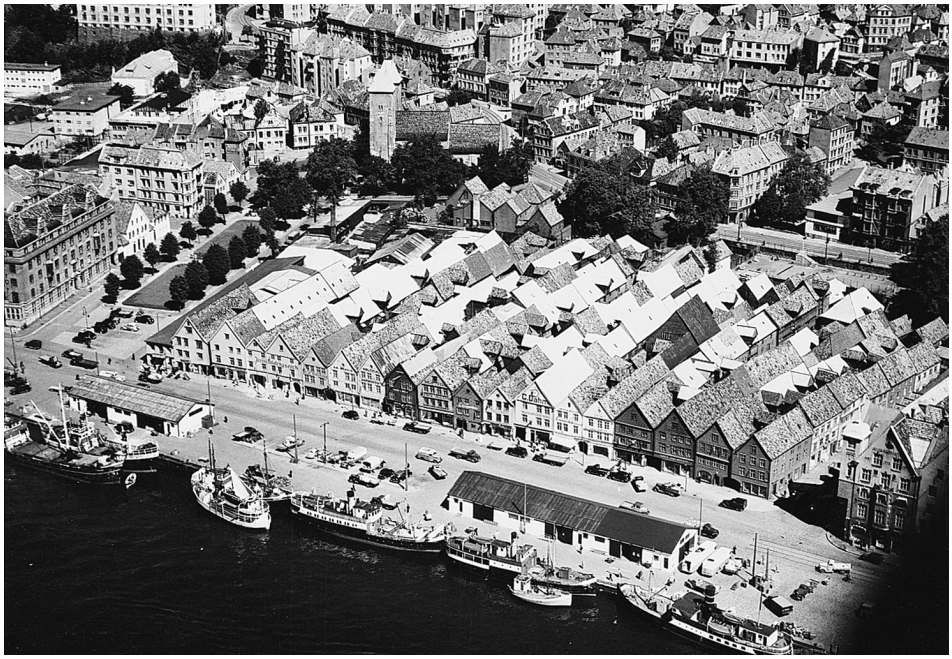


Fig. 15. The northern Bryggen tenements before 1955. The old wooden Bryggen tenements between Dreggsalmenningen to the north (left) and Nikolaikirkealmenningen to the south (right) as they were standing before the fire of 1955. The three rows of houses to the left belonged to the tenement of Gullskoen, moved to the south and rebuilt in this situation as the northernmost Bryggen tenement after the 1702 fire.

local Germans, described in the *Schüttungsrechnungsbuch*, but also to the fact that there was an open space between the Small Svensgården and Søstergården. Here, a thoroughfare led up from the sea to the southern entrance of St Mary's church, north of which the site of the former tenement of Miklagard had been left open after the fire of 1476 (Helle 1982, 236–37, 701; cf. above No. 15). This measure, intended to contain the spread of future fires, did thus prove adequate in 1527.

18. 1528

A. Sources

Letter from Henrik Krummedike to Eske Bille, 9 January 1529:
The letter was sent in connection with Eske Bille's imminent takeover of Bergenhus Castle, and mentions that 'there burnt a monastery in Bergen one year ago. There was taken out of the wall or the ground a large, remarkable sum of gold' which would rightfully belong to the king' (*DN*, vol. 11, No. 511).[55]

Letter to King Frederik I from Eske Bille, Bergenhus 17 February 1530:
Here is mentioned, for one thing, that Eske sends the king 'two inventories of the silver, gold, treasures I was told were taken out of the Apostles' Church and the Blackfriars' monastery' (*DN*, vol. 13, 617).[56]

Inventory, [before 17 February 1530]:
This is obviously a copy of the above mentioned inventory of what had been taken out of the Blackfriars' house: 'Register of that gold, silver, and treasures which I have been told were taken out of the Blackfriars' monastery here in Bergen'. The last item on the list is an amount of silver: 'That took Prior Jens before the monastery burnt, and told us that the monastery owed him that much' (*DN*, vol. 13, No. 569).[57]

Letter from King Frederik I, 15 July 1530:
The king grants property to Jens Mortensen 'who was prior of the Blackfriars' monastery in Bergen. We have let it be told to us that the same monastery was burnt down some time ago ...' (*DN*, vol. 16, No. 538).[58]

Bergens Fundas:
'Anno 1528 burnt the Blackfriars' monastery on Kannikeberget with extremely beautiful treasures and other wealth that benefited nobody' (Sørlie (ed.) 1957, 65).[59] This is repeated by Edvardsen (Brattegard (ed.) 1951, 65).

B. Commentary

The sources rendered above make it clear that the Dominican House of Bergen was destroyed by fire at some time during the year of 1528. It was situated on the northern edge of Holmen, later called Kannikeberget ('the canons hill') after the canons of the Christ Church cathedral whose quarters were situated to the south of and above the Blackfriars' (cf. Helle 1982, 575–76, 611).

There is no indication that the fire spread to other parts of Holmen. Treasures had before 17 February 1530 also been taken out of the Apostles' Church, on the southern edge of Holmen, but this was due to the breaking down of this church in the spring of 1529, not to the fire that had earlier destroyed the Dominican House (Helle 1982, 884).

19. 1536 [before 21 March]

A. Sources

Absalon Pederssøn:

In his *Oration om Mester Geble* Absalon relates that Geble, the bishop elect of Bergen, had taken over the monastery of Munkeliv. Archbishop Olaf Engelbrektsson was behind a rising against King Frederik I and dispatched his naval commander, Christoffer Trondsson Rustung, to take Bergen. The captain of Bergenhus Castle, Tord Roed, now feared that Master Geble would hand over Munkeliv to Christoffer Rustung: 'Therefore, he asked Master Geble for permission to send some retainers or soldiers to keep watch in the monastery, up in the tower. He [Geble] permitted this, and expected no damage after his [Tord's] promise and assurance. However, he [Tord] had his servants hoist up some barrels in the tower, as if there was beer in them. But it was tar and gunpowder, which he placed together with firewood around the roof, and then set fire to. When the monastery had been burnt down in this fashion, Master Geble wanted to rebuild it, because it was only the woodwork that was burnt and the stonework was not damaged. As he took into account that the same fate would perhaps overtake it [the monastery] a second time, if war was started, he desisted, and moved the remaining woodwork standing on the lower side towards Håstein, that is Damsgård, to the Greyfriars' House, which is now the residence of the bishop, and had it erected on the wall in front, and lived there afterwards. As to the stonework left standing [in the monastery] Tord Roed provided peasants, who broke it down with iron rods so that it was never rebuilt' (Kolsrud and Valkner (ed.) 1963, 39–40).[60]

Much the same story, but not quite so detailed, is told by Absalon in *Om Norgis Rige*. Here is also mentioned that the burning of Munkeliv was speeded up by gun shots from the Castle (Storm (ed.) 1895, 78–79).

Bergens Fundas:
When Christoffer Rustung approached Bergen he had planned to take the monastery of Munkeliv: 'When Tord Roed and Stig Bagge, Eske Bille's commanders here in the Castle, got to know this, they set fire to the same church and monastery' (Sørlie (ed.) 1957, 66).[61]

B. Commentary

The monastery of Munkeliv must have been burnt down before Christoffer Trondsson Rustung arrived in Bergen with his naval force. This happened in 1536, at some time before 21 March. On this day four Bergen burghers issued an account of their talks with Christoffer and of the negotiations between him and Tord Roed (*DN*, vol. 11, No. 632).

The writings of the Bergen humanists in the second half of the sixteenth century must be considered quite reliable sources in this matter. When Munkeliv was burnt in 1536, Absalon Pederssøn was an eight year old boy attending the Bergen school of which Master Geble was the leader. In 1543 Geble adopted the fatherless Absalon as his son (Kolsrud & Valkner (ed.) 1963, 8). In addition to what Absalon himself may have seen and heard in 1536, he must more than once have heard the story of the burning of Munkeliv from Master Geble himself. The anonymous author of *Bergens Fundas* (1559/60) may also have experienced what happened in Bergen in 1536.

Supplementary survey of major fires 1561–1702

In the following survey are more summarily listed major post-medieval fires in Bergen up to and including the conflagration of 1702, the last one that afflicted Bryggen before the fire of 1955. Restricted local fires are not mentioned. The survey is based on Nielsen (1877) and Fossen (1979).

19 December 1561 Strandsiden west of Vågen was burnt down from the second house outside (north) of the new Town Hall out to and including Erik Rosenkrantz' double tenement, on the site of which he later erected his stone house called Muren. Above Strandgaten (the street running parallel to the shore west of Vågen) 44 tenements and storehouses burnt, below the street towards Vågen 42 tenements, among them quite a few double tenements. The fire threatened to spread further, but it was stopped before it afflicted Vågsbotn and Bryggen (Nielsen 1877, 315–16; Fossen 1979, 89–91).

14 February 1582 Strandsiden burnt, from Muralmenningen in the south in to and including the Town Hall in the north. The fire spread to Vågsbotn, where the

cathedral (the earlier St Olaf's of the Franciscans) was barely saved. The fire appears to have reached Vetrlidsalmennigen on the northern edge of Bryggen, but Bryggen itself was spared (Nielsen 1877, 316–17; Fossen 1979, 269).

6–7 September 1589 in the night burnt the northern part of Strandsiden, spared in the fires of 1561 and 1582, from Muren in the south to the Archbishop's Estate in the north (Nielsen 1877, 316; Fossen 1979, 271–72).

6 April 1623 burnt the whole of Strandsiden and Vågsbotn, except for a few houses north of Nykirken ('the new church', formerly the Archbishop's Estate) and some houses to the southwest of the Munkeliv ruins. All churches and institutions in the two areas mentioned were destroyed with the exception of the Hospital in Marken. The fire was stopped south of St Martin's Church and Bryggen (Nielsen 1877, 318–20; Fossen 1979, 273).

5 July 1640 burnt Strandsiden south of Muralmenningen and Vågsbotn as far south as Lungegårdsvann. Bryggen and the built-up area behind, along Øvregaten, was once more saved (Nielsen 1877, 322–23; Fossen 1979, 280).

18 June 1660 burnt the northern part of Strandsiden between Muralmenningen and Nykirken. Nykirken was barely saved, but the watch-tower built in the Munkeliv ruins was burnt (Nielsen 1877, 371–72; Fossen 1979, 473).

29–30 July 1675 in the night fire broke out at Øvregaten, behind the Bryggen tenement of Bredsgården, and some hundred houses were destroyed, most of them apparently small. Thanks to energetic fire-fighting Bryggen was again spared together with St Mary's Church and the area further north, out to and including Bergenhus Castle (Nielsen 1877, 372; Fossen 1979, 474–75).

27 September 1686 fire broke out in a house south of Nykirken. The church was saved, but Strandsiden burnt as far south as Muralmenningen. 231 dwelling houses, 218 storehouses at the sea and 216 'lofts' were destroyed (Nielsen 1877, 372; Fossen 1979, 474–75).

19 March 1702 Bergen was afflicted by the most extensive conflagration so far. The fire broke out in a house close on Manufakturhuset and the fire spread northward on both sides of Vågen. The town was destroyed from St Jørgen's Hospital to Bergenhus Castle, but the Castle itself was saved together with St Mary's Church and the built-up area above the church to the north. On Strandsiden the

fire was stopped just south of Nykirken, which was spared (Nielsen 1877, 372–73; Fossen 1979, 481–82).

The fire history of various town areas

It leaps to the eye that the western shore of Vågen, *Strandsiden*, was particularly hard hit by the major *post*-medieval fires listed above. Building here did not seriously start until the late thirteenth century. In the course of the fourteenth century quite a few tenements were erected along the shore in the southern part of the area, south of the present-day Muralmenningen. In the course of the fifteenth century building also took place further out, as far north as the Archbishop's Estate where Nykirken is standing today. At the end of the century the whole of the area was apparently quite densely built up along the shore (Helle 1982, 188–91, 718–21).

The late building-up of Strandsiden goes a long way to explain that no major fire is recorded in this area until 1489, though one cannot exclude the possibility that it was affected by earlier fifteenth and fourteenth century fires such as those of 1332, 1393, and 1429. Later tradition would have it that the whole area was afflicted in 1489, and most of it was also destroyed in 1623 and 1702. In addition, the area south of Muralmenningen was reduced to ashes in 1561, 1582, and 1640, whereas the area further north was hard hit in 1589, 1660, and 1686.

Until the end of the thirteenth century most of the built-up town was situated east of Vågen, on Bryggen, along Øvrestretet and in Vågsbotn (Helle 1982, 186–91), and we have seen that it was not until the fifteenth century that Stranden was more densely built up. Consequently, *medieval* fires mainly struck the older parts of the town mentioned.

The *Bryggen* area, the economic centre of the medieval town, experienced more or less total fires in 1198, 1248, and 1476. A large part, if not all, of the area was also reduced to ashes in 1413, and it appears that quite extensive fires occurred in 1071/71 and 1332 as well. Furthermore, parts of Bryggen were probably affected by the fire caused by the *Vitalienbrüder* in 1429, possibly also by the fire kindled by them in 1393. Towards the end of the Middle Ages, in 1527, the five northernmost Bryggen tenements then standing were burnt down.

Contrary to what happened in the Middle Ages, Bryggen was saved from the numerous fires that destroyed the whole of or large parts of Strandsiden in the sixteenth and seventeenth centuries. This was partly due to the effective fire-fighting efforts of the Germans of the *Kontor* and to the precautions against future fires taken by them after the sad experience of the 1476 conflagration. Nevertheless, in 1702 it proved impossible to save Bryggen from the most extensive Bergen fire so far.

The area of *Vågsbotn* was situated in between Bryggen and Strandsiden, and gradually changed its character as the innermost part of Vågen was filled in and built up. As Vågsbotn had been built up already in the late twelfth century, it got the worst of both worlds, being seriously afflicted by medieval as well as post-medieval fires.

Along with Bryggen Vågsbotn was hard hit by the well-documented conflagrations of 1198, 1248, 1476, and 1702, and the fire of 1413 probably started there. But the area was hardly totally destroyed by all of those fires. Houses south of the Church of the Holy Cross were spared by the fire of 1198, and a few tenements were left standing in Vågsbotn after the fire of 1248. The area south of the Holy Cross' may also have escaped the fires of 1413 and 1476, whereas the destruction in 1702 was quite total. The fire kindled by the *Vitalienbrüder* in 1393 ravaged the English tenement and probably also a larger part of Vågsbotn. Finally, the area may have been affected by the fires of 1170/71 and 1429, but the extent of these fires cannot be established from written evidence.

From the end of the Middle Ages onwards, Vågsbotn distinguishes itself from Bryggen by being affected by most of the fires that hit the whole or southern part of Strandsiden. The fire of 1489 may have reached Skostredet. The fires of 1582, 1623, and 1640 caused great damage in Vågsbotn, even if the area to the south of the cathedral (Domkirken) was spared in 1582 and 1640. To sum it up, Vågsbotn was up to and including the 1702 conflagration affected by more major fires than any other quarter of the town.

Largely, the area behind Bryggen, along *Øvrestretet*/*Øvregaten*, was affected by the same major fires that hit Bryggen. The area was seriously affected by the conflagrations of 1198, 1248, 1413, 1476, and 1702; in 1413 it may have been hit harder than Bryggen. Yet, the destruction was not always total; in 1198 the area south of St Nicholas' Church was spared above the street, in 1702 the buildings above St Mary's Church to the north. When it comes to the fire of 1170/71 and the fires caused by the *Vitalienbrüder* in 1393 and 1429, the same goes for the built-up area above Øvrestretet as for Bryggen: it was probably affected in 1170/71 and 1429, and it may have been affected in 1393. The fire of 1675 was quite special, since it destroyed some hundred houses above Øvregaten but was stopped before it reached the Bryggen tenements.

At the northern end of the town east of Vågen, *Holmen*/*Bergenhus* enjoyed a degree of natural protection from fires raging in the built-up area further south. Chances were good of stopping major fires at Sandbru. On the other hand, local fires originating at Holmen – such as the burning of the wooden Royal Estate in 1207, the fire in the great Hall of the same estate in 1266, and the destruction of the Dominican House by fire in 1528 – would not easily affect the town area south of Holmen.

However, Holmen did not completely escape major fires in the built-up area to the south. The Apostles' Church, situated not far north of Sandbru, was particularly exposed to such fires. It was afflicted in 1413 and 1476, but the fires of these years did apparently not spread further north. The conflagration of 1248 may have reached the Bishop's Estate at Holmen via wooden buildings just north of Sandbru; this was before the third and last of the Apostles' churches had been erected in the latter area. Conversely, when the *Vitalienbrüder* set fire to the estates of king and bishop on Holmen in 1429, it was presumably the same fire that spread to the built-up town area on the other side of Sandbru.

Even so, Holmen, with its royal and ecclesiastical buildings, enjoyed a high degree of protection from town fires further south. It was mostly hit by fires originating in the area itself. Altogether, the number of medieval fires at Holmen was modest as compared with those ravaging other parts of the town. In the post-medieval period up to and including the conflagration of 1702 the area was not at all affected by major town fires.

Bibliography

Bendixen, B E, 1912 Bartholomeus Voet og erobringen af Bergen i 1428 og 29, *Historisk Tidsskrift*, rk. 5, vol. 1, 349–80. Kristiania.

Benediktsson, J, 1976 þorgils saga skarða, *KLNM*, vol. 20, 386.

– 1993 Annals, 2. Iceland (and Norway), *MSE*, 15–16.

Bjørgo, N, 1967 Om skriftlege kjelder for Hákonar saga, *Historisk Tidsskrift*, vol. 46, 185–229. Oslo.

Blackmore, L, & Vince, A, 1994 Medieval Pottery from South-east England found in the Bryggen excavations 1955–68, *The Bryggen Papers, Suppl. series*, No. 5, 7–159. Bergen.

Brattegard, O, (ed.) 1951 *Edvard Edvardsen, Bergen*, Bergens historiske Forening. Skrifter, No. 55/56. Bergen.

Bruns, Fr, 1900 *Die Lübecker Bergenfahrer und ihre Chronistik*, Hansische Geschichtsquellen, NF vol. 2. Berlin.

– 1910 Einleitung, *Chroniken*, vol. 30, pp. IX–XLII.

Bull, E, 1925 Bergen og Hansestædene. Nogen oplysninger fra nordtyske arkiver, *Bergens historiske Forening, Skrifter*, No. 31. Bergen.

Christensen, A, 1988 *Brande og kronologi i Bergen – belyst ved tre mindre udgravningsfelter,* Magisteravhandling, Universitetet i Bergen.

Chroniken = Koppmann, K, & Bruns, Fr, (ed.) *Die Chroniken der deutschen Städte*, vols. 26, 28, 30–31, Göttingen, 1899–1911/1967–68.

DN = *Diplomatarium Norvegicum*, vols. 1–22. Christiania/Oslo 1849–1995.
Dunlop, R, & Sigurðsson, J V, 1995 An Interdisciplinary Investigation of Bergen's Forgotten Fire: Confrontation and Reconciliation, *Norwegian Archaeological Review*, vol. 28, 73–92. Oslo
Einarsdóttir, Ó, 1964 *Studier i kronologisk metode i tidlig islandsk historieskrivning*. Stockholm.
– 1993 Magnúss saga lagabœtis, *MSE*, 401–2.
Eirsp. = Jónsson, F, (ed.) *Eirspennil – AM 47 fol – Nóregs konunga sǫgur Magnus góði – Hákon gamli*. Kristiania, 1916.
Fischer, G, & Fischer D, 1980 *Norske kongeborger*, vol. 2. Oslo.
Flat. = [Vigfusson, G, & Unger C R (ed.),] *Flateyjarbok*, vols. 1–3. Christiania, 1860–68.
Fossen, A B, 1979 *Borgerskapets by 1536–1800*, Bergen bys historie, vol. 2. Bergen.
Fris. = Unger, C R, (ed.) *Codex Frisianus*. Christiania, 1871.
Hanserecesse, Koppmann, K, et al. (ed.), Abth. 1, vol. 1–Abth. 4., vol. 2. Leipzig & Köln, 1870–1970.
HansUB = Höhlbaum, K, et al. (ed.) *Hansisches Urkundenbuch*, vols. 1–11. Halle, München und Leipzig, 1876–1939.
Helland, A, 1916 *Topografisk-statistisk beskrivelse over Bergen*, vols. 1–2. Kristiania.
Helle, K, 1958 *Omkring Bǫglunga sǫgur*, Universitetet i Bergen, Årbok, Hist.-antikv. rk., No. 7.
– 1961 Hákonar saga Hákonarsonar, *KLNM*, vol. 6, 51–54.
– 1979 *Branner i Bergen i middelalderen: en oversikt*, MS. Bergen.
– 1982 *Kongssete og kjøpstad: Fra opphavet til 1536*, Bergen bys historie, vol. 1. Bergen.
Herteig, A E, 1969 *Kongers havn og handels sete*. Oslo.
– 1985 The archaeological excavations at Bryggen, 'the German Wharf', in Bergen 1955–68: Excavation, stratigraphy, chronology, field-documentation, *The Bryggen Papers, Main series*, vol. 1, 9–46. Bergen.
– 1990 The buildings at Bryggen: their topographical and chronological development, *The Bryggen Papers, Main series*, vol. 3, part 1. Bergen.
Holm-Olsen, L, 1972 Sverris saga, *KLNM*, vol. 17, 551–58.
Indrebø, G, (ed.) 1920 *Sverris saga etter Cod. AM 327 4°* Kristiania.
Isl. Ann. = Storm, G, (ed.) *Islandske Annaler indtil 1578*. Christiania, 1888.
Karlsson, S, (ed.) 1983 *Guðmundar sögur biskups*, vol. 1, Editiones Arnamagnæanæ, Ser. B, vol. 6. København.
– 1993 Guðmundar sögur biskups, *MSE*, 245–46.
KLNM = *Kulturhistorisk leksikon for nordisk middelalder*, vols. 1–22. Oslo, 1956–78.

Knirk, J E, 1993 Konungasögur, *MSE*, 364–65.
Kolsrud, O, & Valkner, K, (ed.) 1963 *Oration om M: Geble*. Bergen.
Koppmann, K, 1899 Uebersicht über die Historiographie Lübecks von 1298–1438, *Chroniken*, vol. 26, pp. IX–XVII.
– 1902 Einleitung. *Chroniken*, vol. 28, pp. XI–XX.
Koren Wiberg, Chr, 1908 *Bidrag til Bergens kulturhistorie*. Bergen.
– 1921 *Bergensk kulturhistorie*. Bergen.
– 1926 *Det hanseatiske Museums Manuskriptsamling*, Det hanseatiske Museums Skrifter, No. 5. Bergen.
Kaalund, K, (ed.) 1906–11 *Sturlunga saga*, vols. 1–2. København & Kristiania.
Lorentzen, B, 1954 *Gård og grunn i Bergen i middelalderen*, Det Hanseatiske Museums Skrifter, No. 16. Bergen.
Luard, H R, (ed.) 1880/1964 *Matthæi Parisiensis, monachi sancti Albani, Chronica majora*, vol. 5, Rerum Britannicarum medii ævi scriptores [57]. London.
Magerøy, H, (ed.) 1988 *Soga om birkebeinar og baglar*, parts 1–2, Norsk Historisk Kjeldeskrift-Institutt, Norrøne tekster, No. 5. Oslo.
Munch, P A, 1852–63 *Det norske Folks Historie*, vols. 1–4:2, part 2, vols. 1–2. Christiania.
Mundt, M (ed.) 1977 *Hákonar saga Hákonarsonar etter Sth. 8 fol., AM 325 VIII, 4° og AM 304, 4°*. Oslo.
MSE = Pulsiano, Ph, et al. (ed.) *Medieval Scandinavia: an encyclopedia*. New York & London, 1993.
NGL = Taranger A, et al., (ed.) *Norges gamle Love*, rk. 2, vols. 1–2. Oslo, 1912–34.
Nielsen, Y, 1877 *Bergen fra de ældste Tider indtil Nutiden*. Christiania.
No. Mag. = Nicolaysen, N, (ed.) *Norske Magasin*, vols. 1–3. Bergen, 1860–70.
NRJ = Huitfeldt-Kaas, H J, & Johnsen, A O, (ed.) *Norske Regnskaber og Jordebøger fra det 16de Aarhundrede*, vol. 1–4. Christiania/Oslo 1887–1972.
RN = Bjørgo N, et al. (ed) *Regesta Norvegica*, vols. 1–7. Oslo, 1978–97.
Schreiner J, 1935 *Hanseatene og Norges nedgang*. Oslo.
Sk. = Kjær, A, & Holm-Olsen, L, (eds.) *Det Arnamagnæanske Haandskrift 81a Fol. (Skálholtsbók yngsta)*. Kristiania/Oslo, 1910–86.
Storm, G, (ed.), 1880 *Monumenta historica Norvegiæ*. Kristiania.
– 1888 Forord, *Isl. Ann.*, pp. I–LXXXIV.
– (ed.) 1895 *Historisk-topografiske Skrifter om Norge og norske Landsdele*. Christiania.
– 1898 Vitaliebrødrenes Plyndretog til Bergen i 1393, *Historisk Tidsskrift*, rk. 3, vol. 4, 428–40. Kristiania.
Sørlie, M, (ed.) 1957 *Bergens Fundas*. Bergen.

Notes

1 Sa var kallaðr inn GOðe uetr. þa braN bæREN iBiørgyn. þa var hin heilaga Sunnefa fèrð iBiørGin or eyiunne Selio. aðr um várit. ok støðuaðe þat elldz gangiN. er skrin hennar var imote borit.

2 Brann Biǫrgyn (*Isl. Ann.*, 117).

3 Brendr bær in Biorgyn.

4 Baglar reru um nottina iN firir bryGior með .ii. scutur laðnar af viði. þeir logðu elld i hus i einum stað iN við Cros-kirkiu. en i oðrum stað gegnt Favska-bryGiom við garð FiNz foRæðis .iii. stað við Mariu-kirkiu (*Sk.*, 200: Engi ward wornn af bæiar-mònnum; ward þeim whægt wit at komazt) þvi at allar bryGir varo upp tecnar. Birkibeinar urðu eigi varir við fyR en børiN toc at loga. oc sa þeir at þa matti ecki at gera at hialpa bønum. hrædduz þeir um borgina at hon myndi brenna. Baru þa ut segl oc vættu imot elldinum. BøRin braN allt iN fra Cros-kirkiu oc til Sannbruar allt firir neðan stræti. En firir ofan stræti oc ut allt fra SaNbru oc iN til Nicolas-kirkiu. þa var roðan helga borin imoti elldinum fra Steinkirkiu oc staðnaði þar elldriN. Sunnefu scrin var borit utan til Sannbrvar oc sett þar. gecc elldriN eigi þar lengra oc var þat all-biort iartegn. Baglar lagu með scuturnar a Vaginum ut oc scutu upp i elldinn at þeim monnum ef noccorir villdi biarga husunum eða slockva elldinn. Biorgyniar-menn margir hofðu aðr bravt flutt allt fe sitt þat er þeir mattu við comaz. þa er þeir heyrðu at Baglar ætluðuz þetta rað firir. fluttuz sumir i heruð en sumir upp til borgar. Nicolas byskup var a scutu þeiri er með elldiN for til bøiarins oc sagði hvar elldiN scylldi upp bera oc i sciota oc var hann allmioc u-þokkaðr af þeso raði. þetta var margra manna mein oc scaði. sva at sa margr er aðr var fullsæll gecc snavðr i-brot. MiNtuz Biorgyniar-meN þesa opt við Nicolas byscup. þar braN Mariu-kirkia oc .v. aðrar (Indrebø (ed.) 1920, 157—58).

5 Baglar brenndv Biǫrgyn (*Isl. Ann.*, 121).

6 brendr ber i Byrgion (*Sk.*, 254).

7 *Sk.*: Birkibeinar gengu í móti út á borgarveggina. Sóttu Baglar þegar at. En þunnskipat var fyrir. Hrukku Birkibeinar inn af veggjunum og í meginborgina. En Baglar kómusk inn í útborgina, ok unnu hana skjótt og svá kastalann. En er Baglar sá, at þeir fengu ekki at gert meginborginni, þá brenndu þeir útborgina, en skipuðu sínum mǫnnum kastalann.... þá tóku Baglar borgina ok fengu þar vist mikla, en lítit fé annat. Mánadaginn kom konungrinn til bœjarins. Týsdaginn gekk fólkit ór borginni. Óðinsdaginn var rannsakat í borginni, en þórsdaginn brennd. Frjádaginn at kveldi var til tekit at brjóta borgina ok allan laugardaginn. þa kom þeim njósn, at Håkon jarl fœri austan.

Lǫgðu þeir því sunnudaginn út i Flóruvága.... Annan dag vikunnar fóru Baglar inn til borgar ok létu blása ǫllum bœjarlýð til at brjóta borgina.

8 ... siden sette de Jld paa Slottet, da befunde de at de haffde icke vel randsagit, thi smeltet Smør rand stride ud igiennem Vegne, da brende alt som brende kunde paa Slottet, oc Muren refnede om Løfuerdagen, der effter brudde de Muren ned ...

9 K. Jngi var i Bergen, oc lod opbygge Kongens Gaard igien, som Baglerne hafde brent hos Slottet, oc sette Salen der som den store K. Østens Sal hafde staaet, men Slottet lod hand icke opbygge.

10 FIortan nottum fyrir Jonsmessovoku urdu mikil tidende j Biorguin. þa uard elldr laus miog sua j midium bænum ok j gardi þeim er Straumurin heitir, vm nottina, þann tima er hringdi yfir. En adr hofdu uerit þuruidri, ok lek elldrin skiott. Kongr kom til fyrir jnnann Peturskirkiu og fatt manna med honum. Enn skiott kom þo hirdin ok bæiarmenn, ok ætludu þar at veria elldinum j fystunni. En þa var sua miog leikit, at þeir mattu þar ecki vid festazt. Foru þeir þa um Mariukirkiu ok ætludu þar at ueria. Geck sua fast, at Mariukirkia tok [at] brenna ok stoplarnir. þa vard sua mikil ellzgangur, at honum kastadi upp j borgina, ok tok hun at loga. For þa kongr þangat ok mart manna med honum. Brunne þar margir menn inne, adr ut komuzt. En er kongr kom til bæiar, var þar mikill ellzgangur. Vardi [folkit] þar ut uid Sanbru. For kongr þangat ok kom þar j manhaska. þa [var], sem jafnan j mannraunum, at kongr for diarfliga ok þo radliga at koma þui fram, sem hann villdi. þar flutu feriur ok kuggar nockurir komnir af Gottlandi. Kongr for j bat ut til kugganna ok feck þar stora katla. þeir voru fylldir af sio ok fluttir sua upp aa bryggiur. Var sidan sionum steypt j elldinn, ok vard sua slocktur med Guds myskunn ok kongs giptu. þar j Biorguin vard ok fam dogum sidar undarligur at burdr, at þar geck reididuna med elldingu ok laust j þekiu þess manz (*Flat.*, vol. 3, 175: loptz) [er] juncherra uar inni, son Hakonar kongs, ok reif rafit upp um nockura fadma. Uar þat mikil Guds miskunn, er elldingini laust eigi jnn. Enn hon flaug sidan ut a Vogin ok laust j siglutre a kiol einum, er flaut fyrir bænum, ok tok treit i sundur j smar flisir, sua ad naliga sa þess aungua stade. Einn hlutur af treno vard ad skada einum manne, er kominn uar a kiolin vr bænum at kaupa glys; enn engua sakadi adra, þa er a kilinum voru. Bærinn uar allr brunninn fyrir innan Sandbru fyrir utan fa garda inn uid Uogsbotninn (*Sk.*, 608—10).

11 Sá atburðr gerðiz þar, at eina nótt varð þar eldr lauss í bænum; var þá blásit um allan bæinn. Ok er þetta herboð kom í konungs herbergi, klæddiz hann nú sjálfr skjótt ok hét á þá menn, er hjá honum váru. Hann lét blása út allri hirðinni ok ǫllum bæjarlýðnum til þessa ófriðar, ok vápnuðuz menn sem til

bardaga, ok skipaði konungr hirð sinni, þar sem honum þótti mest þurfa; bað konungr menn fara varliga ok þó djarfliga. Var eldsgangrinn svá ákafliga mikill, at ólikligt þótti, at sløkt mundi verða. Var þá margs í leitat, borit í vatn ok sjór ok brotin víða herbergi. Konungr kvað á, hvar þorgils skyldi standa, en hann vildi fram ganga miklu lengra; fekk hann svá mikinn háska við þat, at þat þótti með ólikindum, er hann helt lifi meiðingarlaust. Um síðir lét konungr taka lang-skips segl ok gera allvátt ok bera at eldinum. Varð þat þá um síðir, at eldrinn sloknaði med guðs miskunn ok hamingju konungs....

Lauss varð eldr fyr ǫldum	Náði þorgils þjóðar
albrátt, er tók nátta;	þrekbráðr lofi ráða
út gekk hirð með Hǫrða	þar er eimr á lið ljóma
hildingi vegmildum.	logreitar brá heitum.

12 In Norwegia autem ita desævit ignis dampnosus in tribus principalibus civitatibus, quod admirationem et stuporem in cordibus omnium generaret. Quarum una, scilicet Berge, totaliter, exceptis quator religiosorum domibus et domini regis palatiis, capella, et thalamis, in cineres est redacta. Combustæ namque sunt de memorata civitate undecim parrochiæ cum quibusdam domibus episcopi ipsius civitatis, volavitque flamma ultrix peccatorum usque ad castrum regis, quod tunc fuit in ipsa civitate, quantum potest arcus quinquies jacere sagittam, ad instar draconis ignivomi mappam post se trahentis. Unde incolis nihil certius constitit aut manifestius quam divinæ ultionis hoc fuisse severitatem. Castrum enim, quod erat maximis et durissimis constructum molaribus, pro majori parte redactum est in favillas. Dieque proximo sequenti, intonuit Dominus super locum civitatis tam terribiliter quam horribiliter, missoque fulgure repentino, maximam, quæ de Anglia venerat et eadem nocte applicuerat, navem concussit, et quendam hominem in ea contrivit ad mortem, et omnes alios in navi existentes vel vulneravit vel læsit enormiter, malumque in fragmenta minutissima quassatum in mare misit, et omnes quæ in ipso portu erant naves, videlicet ducentas vel plures, commovit. Ipse qui et hæc scripsit in navi extiterat [cujus] malus confractus erat; sed eadem hora in quadam ecclesia, quæ juxta litus erat, Missam celebravit, quasi proceleuma nauticum canendo, Deo gratias post pericula pontica redditurus. Hæc cum domino regi innotuissent, pro amore ipsius qui in ipsa navi fuerat malum præstantiorem jussit restitui et majorem.

13 Bǫiar bruni i Biorgyn (*Isl. Ann.*, 26).

14 Ero þat ok gamul heit ok iattan Biorgvinar manna siðan þeir wrdu firir þeim skaða at bœrenn gek vpp firir ællz ofgange at gera rœkelega ok retlega tiund sina sem fyr segir æftir fornom kristinsdoms ret.

15 Brann hallin i Biorgyn.

16 Bæiar bruni i Biorgyn (*Isl. Ann.*, 207).

17 bran kirkian j Biorguin.

18 Brenndu þyueskir menn mikinn part af kaupstad i Biorguin.

19 ... super insolenciis seu dissensionibus inter advocatum nostrum Bergis, et civitatenses vestros ...

20 ... super injuriis, ibidem nobis et nostris per vestros vel alios quoscumque hactenus illatis ...

21 at fyrnemfð hiun skulu vphusa til helmings þan luta j Skeggenom er fyrnemft brœdra alteri a. med þui skilorde at þau skulu gera lata tua steinkiallara vrugga firir elði með iarnhurdum og iarngluggum ok ok oll onnur huss at œfra ok at neðra eptir þui sem uyrdulegum herra byskupenom j Biorgvin sira Arnfirni og aðrnefdum hiunum likar, skulu ok fyrnemfð huss vera vpgorð innan tueggia uetra ...

22 aare adr

23 Item venerunt Bergis X liburni, qui ignem posuerunt ad curiam nostram et quando eam non potuerunt comburere, extunc eam fregerunt.

24 Var þa fridr godr j Noregi framm yfer pasker. Komv jnn þyuersker epter pasker j Biorguin med xviij hofudskip af Vismar og Raudstock frændr kongs Albrigts. gengv vpp fyrir jnnan Nordnes næsta dag fyrir Jons dag Hola byskups. Vard þar hid mesta mannfall og mættuz almugin jnn fyrir brædra. uar þar fangin Jon dari af þy[ver]skum og særdr til olifis. en þeir ræntu allar kirkiur vm byin og toku allt [þad] er fie mætt uar og brendu byin j Biorguin, vrdu þeir þrongder til eida byskupin og logmadren j Biorguin. settu þeir þy[ver]ska yfer kongs gardin j Biorgvin og sigldu burt jnnan viij daga.

25 In deme sulven jare wünnen de vitalienbroder Bergen in Norwegen, unde vele ander land vorhérden se in Denemarken.

26 Item en le vigile de seynt George lan du regne le roy Richard secound seszime pluisourz malefeisours et robbours de Wyssemere et Rozstock del compaygnie del Hans forciblement ove graunde navey arrivoient al ville de Northberne en Norwey et mesme la ville par fort assaute gaygnerent et touz le merchantz Engleys et lour biens la esteantz pristerent et lour meysons et habitacions arserent et lour corps a haute raunsone metterent, com piert par les lettres de saufe conduyt a eux deliverez, as damages et perdes des ditz pleyntifs de 5400 nobles.

27 namely, Inprimis they burnt there 21. houses belonging unto the said marchants, to the value of 440. nobles. Item they tooke from Edmund Belytere, Thomas Hunt, John Brandon, and from other marchants of Lenne, to the value of 1815. pounds.

28 ... necnon obligaciones et alias Securitates de Mille libris et amplius infra mansiones suas predictas existentes combusserunt ...

29 Bæiar brune j Biorguin, tveim mottvm fyrir alla heilagra messo. kom fyrst j Enskra manna gard elldurinn. þadan j Garpa strætid. brann þat uppp allt oc vij kirkiur med oc postola kirkia.

30 Anno 1414 vorbrenden de Engelschen Berghenbu.

31 unam stubam, duas bodas, lym et clef et omnes partes ad predicta habitacula in schuttinghesstoven et elthusen in Fingarden Bergis Norwegie situatas appertinentes

32 do stickeden se an des konynges garden und des bischopes hof unde branden de in de grund; van deme vure vorbranden ok vele hus der borghere unde des copmannes.

33 *KD*: Intrantes ergo opidum curiam regiam et episcopi domum ac quasi villam totam ...
KH: Do gingen se in de stad unde stikkeden an des koninges hoff unde des bischopes hus unde alemstich de stad ...

34 Anno 1429 vorbranden de Denen Bergen.

35 Tho Reyser paa einn Sommer erre de hiidt komne till Bergen, Och her plustrede och Brennde Byenn Och ihiell slouge mannge aff Borgernne, Her haffuer och Legit fierre Enngelskers Skiiff paa Wougenn och brugit derris Kiøbmanndtskaff, dennom haffuer de och Andfaldit, hedenn tagit oc Jammerligen Plustridt. Aff denn Rørruerij och Branndt erre Borgernne vdj Bergenn suorligen forargit och forarmitt ...

36 Eit andet *datum* finder ieg vdi nogle latiniske vers om 1429, at Bergens kircker oc closter skulde uere brend aff de Tyske röffuere ... Saa lyde versen: *C D: milleno cum nono sicque viceno comburitur templum Bergense perque piratas*.

37 Do branden de Strome to Bergen.

38 j setzstofunni ytraueghen j Strauminum/j sesstofunni ytraueghen j Strauminum

39 tha søchte alle meneghe køpmænnene æfter med alles tørres macht och sætthe strax eld i klostereth och brænde thet neth i grund ...

40 vnde vorbranden so dat closter jn de grunt ...

41 unde na angesteken und vorbrant vp den dach Egidii ...

42 hiirumme vurden se den torn unde branden en, unde van deme vure brande das ghanse closter.

43 de clegheliken tydinge des jammerliken brandes vnses armen klosters to Berghen

44 *Anno* 1463. Brendte de Graabrødris Closter af.

45 Amme avende Prothi et Jacincti brande de brugge aff, etlike Normans husere unde kerken, so isz denne de kopman van der wegen in groten sorgen up deme strande mit den Normans to husz in eneme gantzen bisteren wesende ...

46 Tovoren des dinxstedages nachtes na nativitatis Marie up den 10 dach septembris vorbrande Bergen in Norwegen van ereme egen vure van der Apostelken kerken an beth an de Sutersstraten unde Schroderstraten myt des Hilligen Cruces kerken, wart nicht gheberget; id quam unvorsichliken tho uth den Weterleden van huseren Brun unde Hans Calveswynkel; untellik gud, vish etc. vorbrande van midnacht wente tor vespertiid.

Darna worden de coplude eens myt des rikes rederen, den tobehorde de tufft, unde buweden wedder na lude der enndracht 13 ellen bade unde lucht, nicht hoger. Unde 3 leddige tufft stan, dar scall de kopman vor antwerden.

47 Item in desseme sulven jare vorbrenden to Bergen des kopmans stovene edder wonynge, unde schach grod draplik schade, wente in den stovenen was vele vysches, de dar mede vorbrande myt kisten, myt bedden unde myt alleme husgherade. dar ward uppe der halve nycht gereddet, wente dat vur gynk up by myddernacht, do alleman sik hadde geven to rouwe. desse schade wert togelecht na orsprunge eneme kopmanne genomet Hans Kalveswynkel, des syn stoven erst anbrande, unde darynne vorbrende syn yunge, unde is drunken werk geweest. desse Hans wakede alle tid gerne lange uppe de nacht unde ward vaken gebeden van den olderluden unde ok synen naberen, da he tozege, dat nyn schade van syner wegene her queme, wan he were by gudeme troste; men he sluch it allent in den wynt up en genent; darumme so vele de mer is myt em de kopman untovrede. item do desse schade was gheschen, do was en duvendryver van den grawen broderen, de under stunden gynk nortsuden by dage unde ok by nachttiden, worumme he dem guardiane ward beclaget. des sprak he: ‘dit bat hebbet my de Dudeschen yngedregen, men se scholen dat sulven wedder uthdregen.’ darumme tallyede de kopman den grawen monnyk an recht, wo he van der sake wat mede wuste, unde vunden by em, so de kopgesellen en del naseggen, mordbernendes spise, dat heten lunten. dat ward geclaget, men wo gerichtet, dat wed alleman nycht noch tor tid.

48 at de for Ildschyld wille legge nogen Grunder Øde paa at Rom war imellem Gaarden, Saa at Gud forbydit om Ild Løs worde, at de maatte dend dessbedre slucke, saa at brøggen ey strax overalt brunde.

49 So is beleveth unnde umme fures nodt vor gudth angesenn, datt nageschrevenen thuffte schoelenn leddich unbebuweth unnde unbelemmert blivenn, alsse de Michelgarde unnde de thufft bi nordenn unde de halve Kappenn bi ssudenn, de gantze Fatten unnde de gantze Schafftenn ...

50 Anno MCDLXXXIX Branndt all Strandenn aff waade ildt till Cløsterrit (var.: Skoestreddit/Skouffstredit).

51 Anno 1487. Brende all Stranden af ud til Closteret oc ind til Skoestrædet.

52 Item anno 1500 unde 27 ys to Bergr eyfgebernt 5 garden, alse de Golscho unde de Klene Swensgarden unde de Stwengarden unde Bermergarden unde de Schege, unde van dysse 5 garde bleff, nycht eyn stock bestande; unde dar vorbrande mede eyn sturmen unde he[t] Jacob Kastensen, unde he wasz Clawesz Fyncken sturmen unde was van Lubeke my wynterber affgesegelt. Unde yt schac in der mydernacht unde yt werde nycht mer alse 3 stunde. Unde de sellen van der Brugr deden grot arbeyt in deme fur, dat se den Sustergarden reyden myt lacken unde mit wetten. Unde in den Golescho de wert ersten bernen, unde dat quam van eren egen fure to, unde se were druncken unde ful in den garden. Unde dyt schac des mandages nacht up den dynxtedach na Applonye dach in jar 1500 unde 27.

53 Anno MCXXxij Branndt Guldtskouffuen ein gaardt Paa Bryggenn.

54 ... kaldis Indre Guldsckoe, og i Fordom tiide war kaldet Sventdtzgaard ...

55 ... der brende et klasther j Bærren et år siden der bleff optagen aff murren eller jorden en sthor merkligh som gul ...

56 ... two scriffther paa huess sølff guldt clenodier som meg er fore sagt att ther bleff wd tagit aff Apostell kiircke oc aff Swarthe brødre closter ...

57 Register paa huess Guldt Sølff oc clenodier som meg er fore sagt att bleff tagit aff Swarthe brødre closter her i Bergenn.... Item 1 lodt sølff som sancta Karina de Senis tiilhørde thett tog prior Iens før endt klosterith brandt oc sagde saa for oss att klosterith war hanum saa møgit skyllig.

58 ... som wor Prier wdj Sorte Brødere Closter udj Bergen, Haffuer ladet beredt for os, att forschreffne Closter nogen thid siden forledenn affbrendte ...

59 Anno MDXXviij Branndt Suorttebrødre Cløster paa Cannickebiergit medt offuermaade skøne Clenodie oc anden Riigdom som Inngen kom till gaffns.

60 Begierede derfor aff M: Gieble, at hand ville tilstæde hannem at forskicke nogle Svenne eller Soldater, som skulle holde Wact i Closteret, oppe vdj Taarnet. Hvilcket hand hannem tilstædde, oc ventede sig ingen Skade effter hans Løffte oc Tilsagn; Jmidlertid lod hand wed sine Tienere ophidtze nogle Tynder i Taarnet, ligesom der skulle være Øll vdj dennem; Men det var Tære oc Krud, hvilcket hand lagde med Weed omkring Taget, oc satte saa Jld der paa. Der Closteret vaar saaledis affbrænt, ville M: Gieble haffve igien ladet opbygge Closteret; Thi Træværcket vaar alleeniste brænt aff, oc Muuren skadde intet; Mens der hand betænckte ved sig, at det maa ske en anden Tid schulle være samme Skebne undergiffven, om Feyde begyntis, thi lod hand det bliffve, oc forflyttede det offverblefne Træværck, som stod paa nedere

Side mod Haasten, det er Dams Gaard; til Graabrøderis Closter, som nu er Bispens Residentz, oc sættede det forist paa Muuren, oc siden boede der; Mens den igienstaaende Muur forskaffede Thore Ruth Bønder til, som med Jernstænger den nedbrøde, saa at det siden aldrig meere bleff bygt.

61 Der Thore Rutth oc Stiig bagge, her Eske Biildiis Befallingsmenndt her paa Slotthidt vdj hans Frawerelse, dette fornumme, lode de stinge ildt paa samme Kircke oc Closter.

Gitte Hansen

The Bryggen chronology

New light upon the dating of the Periods before Fire V

Abstract

A difference in the absolute dating of the material from the Bryggen site in Bergen – even if the difference is only a few decades – has great consequences for our understanding of the development of early urban Bergen as a whole. In the light of an analysis of dendrochronological samples and the ceramic material from the Bryggen excavations, the absolute chronology of the fire layer sequence before Fire V (1248) at the Bryggen site is discussed. The author suggests that Fire V should be dated to 1248, Fire VI to 1198, Fire VII to 1170/71 and Fire VIII to c 1120.

Introduction

The Bryggen site, which covered c 5700 m^2, is one of the most important sources to the study of early Bergen (Figs 1a, 1b). Fires have destroyed parts of the settlement at the Bryggen site as many as 12 times from the time of the earliest settlement up until 1955 (Herteig 1990, 12). The fires, leaving fire layers, have been used to establish a relative chronology for the culture layers at the site. Attempts have been made to give the sequence of fire layers an absolute date, thus dating the expansion of the built up area and the development of the Bryggen site in general. A difference in the absolute dating of the fire layers, even just a few decades, has great consequences for the correlation and comparison of the Bryggen material with material from other archaeological sites in Bergen, and consequently for our understanding of the development of early medieval Bergen as a whole.

In 1990 and 1991, Asbjørn E. Herteig, the director of the Bryggen excavations 1955–1979, published his conclusions to the stratigraphical analysis and the absolute dating of the Bryggen material. Since then there has been an ongoing discussion on the absolute dating of the site. The aim of this paper is to re-evaluate the dating of the periods and the fire layer sequence before Fire V (c 1250) at the

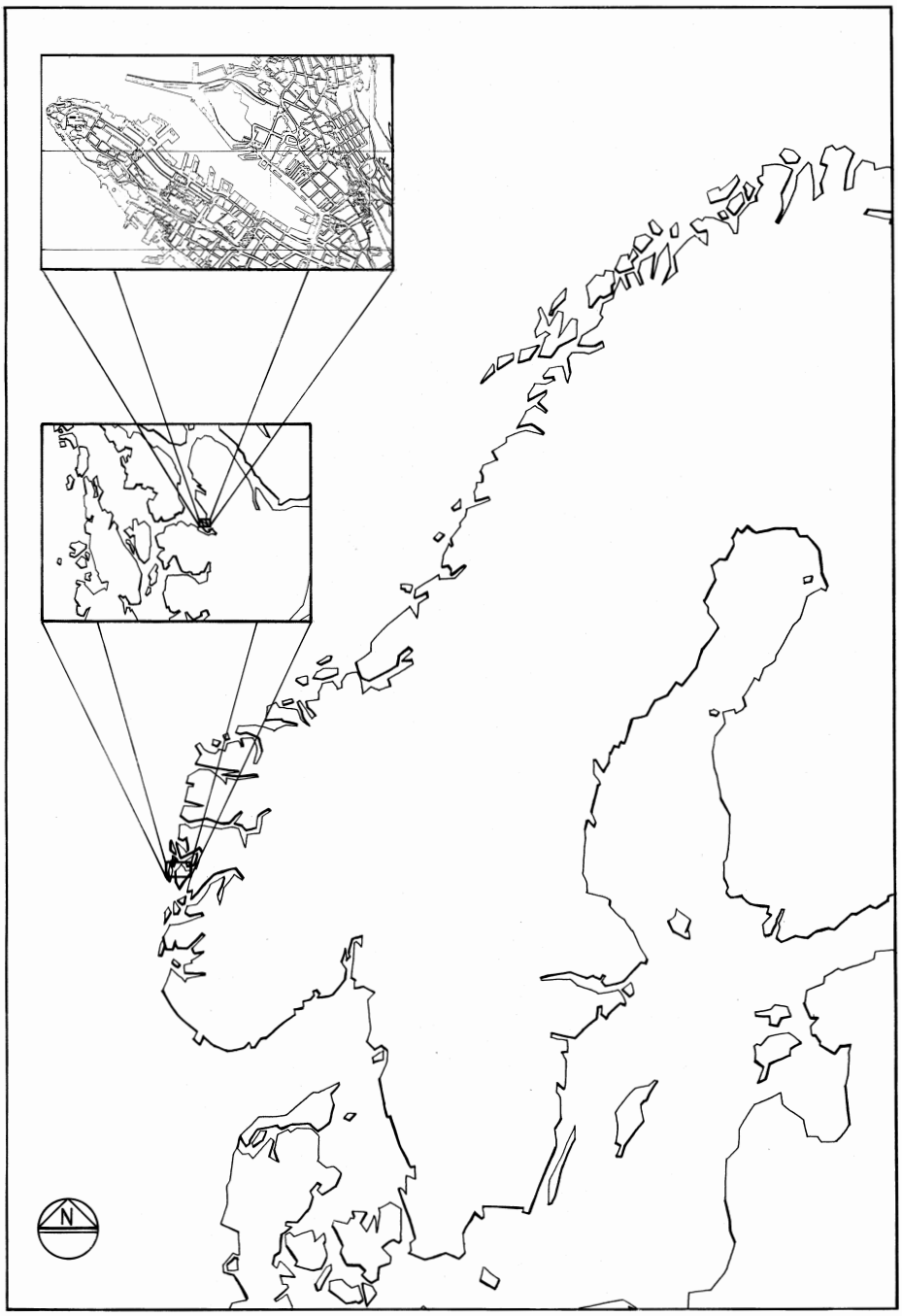


Fig. 1a. Bergen on the southwest coast of Norway.

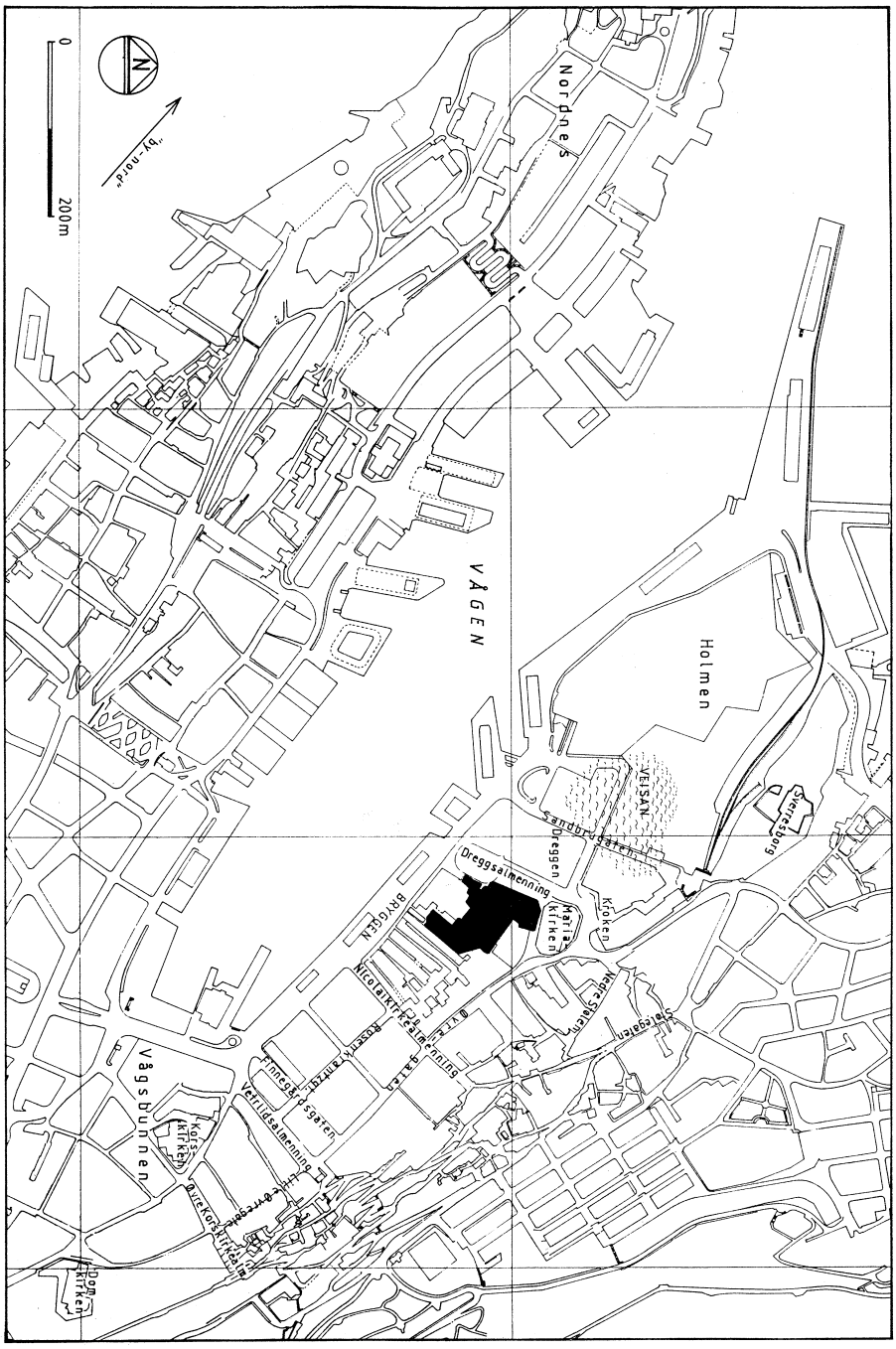


Fig. 1b. The Bryggen site in Bergen.

Bryggen site. New dendrochronological (dendro) dating and a new analysis of the ceramic material from the Bryggen site has given us the opportunity to re-evaluate the absolute dating of the oldest periods at the site.

In the first part of this paper, the terminology, excavation methods and dating system used at the Bryggen site are presented, along with the discussion evolving the absolute chronology of the site. This leads us to part 2, where the absolute chronology of Periods 1–4 is discussed from the point of new dendro dates and a study of the vertical distribution of the ceramic material from these periods.

Part 1

Terminology and excavation methods

The Bryggen material has been divided into periods and building phases. A period is the time span between two fire levels. The period may be subdivided into several building phases and subphases (Herteig 1990, 15). The excavation method applied at the Bryggen site was stratigraphic, with constructions and fire layers as the leading strata. Where layers exceeded c 15 cm in thickness, they were excavated mechanically in c 15-cm layers. Only fire layers were documented and given numbers as separate defined layers, other layers were not registered in such detail. On site the fire layers were given numbers from 0 to VIII; Fire 0 being the fire in 1955 and Fire VIII being the first fire, which devastated the site. Fire layers were central in the documentation of the relative as well as the absolute chronology (Herteig 1985, 22). Artefacts were registered in relation to constructions and fire layers (Herteig 1985, 33).

The fire layers, however, seldom covered the whole site. One of the methodological challenges, therefore, has been to identify and correlate the fire layers from different parts of the site. To rely on the presence of fire layers alone is not enough to perform a stratigraphical analysis. A stratigraphical analysis of the unburned strata is required as well and through this it may be decided which strata belong to which period. A correct stratigraphical analysis should therefore be the backbone of the fire layer framework. A consistent knowledge in the field about which fire layer one was dealing with must have been important as well. A fact that caused problems is that in some parts of the site the upper layers (younger than Fire V) were removed by machine. Having no other methods of dating the strata than 'counting' the fire layers, it was difficult to identify Fire layer V among all the other strata and to decide where and when to stop the machine, this caused problems for the further documentation of structures and finds.[1] A general

documentation problem during the excavation was that some time could pass before a new fire layer was identified, thus fire layers and finds would be catalogued incorrectly. The excavators were, of course, aware of these problems (Herteig 1991a, 26), and there have been adjustments throughout the excavations and while analysing the data for publication (Herteig's preface in Lüdtke 1989).

Dating system

The Bryggen excavations were carried out between 1955–1969, with sporadic excavations until 1979. At the time, the material could not be dated through the archaeological finds alone; important artefact groups such as ceramics, shoes and combs, were at this early state of medieval archaeology still not sufficiently studied and dated. The dating method which was used at the Bryggen excavation for establishing an absolute chronology, was therefore based upon the assumption that the stratigraphically recorded fire layers, could be identified with a series of fires known from medieval written sources (Herteig 1985, 22). The method implied that it was possible to find traces of these fires and that they could serve as a stratigraphical and chronological framework for the whole site. The framework was given an absolute dating, mainly by *counting* the fire layers and relating them to the historic fires mentioned in the written sources. The link between the historically known fires and the actual archaeological fire layers were provided by a few runic inscriptions and the preliminary results from the dendro dating.[2] These were used for identifying the excavated layers with the fires known through written sources.

For the oldest periods, the number of fire layers actually found at the site did not correspond with the number of fires known from the written sources; there was one fire layer too many. In the 1985 publications of the Bryggen material attempts were made at dating the surplus fire, by setting up three alternative interpretations of the fire sequence before Fire V (the fire layer presumed to be the remains of the 1248 fire). The archaeological material, that is two runic inscriptions and the preliminary results from the dating of dendro samples, pointed out alternative I as the most realistic alternative (Herteig 1985, 32). Thus the fire layer sequence in the Bryggen material was given absolute dates as seen in 'the fire layer chronology' from 1985 (figs 2 and 3); this dating proposal was kept in the 1990/91 publications (Herteig 1990, Herteig 1991a).

Counting fire layers and relating the sequence to historically known fires is an unreliable method for dating purposes. One cannot be sure that all the fire layers found on a site actually represent a fire known from the written sources. The written sources must also be thoroughly analysed. This was not done until 1979 (Helle this volume). Later excavations, e.g. Domkirkegaten 6 BRM 245 (Dunlop

Fire Level	Date
0	Corresponds to the fire in 1955
a	A minor fire between 1702 and 1955. Recorded during excavation
I	Corresponds to the historically recorded fire in 1702
b	A minor fire around 1530–1540. Recorded during excavation
Ib	Historically recorded local fire in 1527, north of Søstergården
II	Historically recorded fire in 1476
III	Historically recorded fire in 1413
IIIb	Historically recorded fire in 1393. Found in Bugården and Engelgården and partly also in Søstergården
IV	Historically recorded fire in 1332
V	Historically recorded fire in 1248
VI	Historically recorded fire in 1198
VII	Historically recorded fire during the winter 1170/71
VIII	Previously unknown fire provisionally dated to the mid 12th century or earlier

Fig. 2. The 'fire layer chronology' for the Bryggen material 1985. (Source: Herteig 1985, 32).

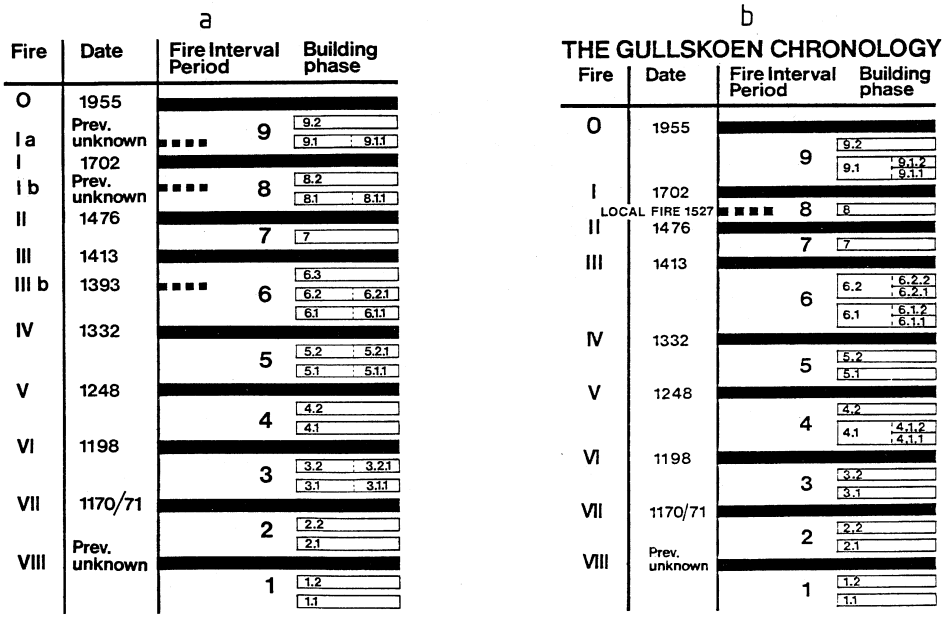


Fig. 3. The 'fire layer chronology' for a) Bugården, Engelgården and Søstergården b) for Gullskogården (after Herteig 1990, 12 and 1991, 14).

et al. 1994, 112) and in fact the Bryggen excavation itself have shown that there have been several 'unknown' fires in Bergen, and it is often seen that the fire layers do not cover the whole site (Christensson 1988). Consequently, it is not advisable to use the number of fire layers alone as a means of absolute dating. *First* a relative chronology has to be established, that is, an account of the stratigraphical relationship between the constructions and layers on a site. *Secondly*, this relative chronology can be made absolute by dating the material archaeologically through artefacts, natural scientific methods etc. And then as the *last step*, one may try to relate the archaeologically dated fire layers to the historically known fire layers, assuming that *some* of the archaeologically documented fire layers may represent historically documented fires.

Herteig was aware of the problems of dating the Bryggen material when he established the 'fire layer chronology'. Much effort has been put into dating the series of fire layers and thus the periods in the Bryggen material through the archaeological evidence and through dendrochronology. Studies of the ceramic material and the dendro samples were undertaken in the late 1980s. Some of these

studies were taken into account when publishing the stratigraphical analysis and the dating of the Bryggen material in 1990 and 1991 (Herteig 1990).

The ceramic studies

Only Hartwig Lüdtke´s study of 12 ceramic wares from the Bryggen site was finished when the stratigraphical analysis and dating of the buildings at Bryggen was published in 1990/91. The aim of Lüdtke´s study was among others to compare the vertical distribution of the ceramic types from the Bryggen material with Herteig´s fire layer chronology. Lüdtke concluded that the traditional dating of the ceramic types did not contradict the suggested fire layer chronology from 1985 (Lüdtke 1989, 34). The conclusion seems reliable for the end of Period 4/ Fire V and the younger periods when we look at the general trends in the material (Hansen 1994, 41). *However*, the absolute date for the periods older than Period 4 is problematic – because in and under Fire VIII no ceramic sherds were found (Lüdtke 1989, 17), and Period 2 which began after fire VIII gave a finds combination which Lüdtke only described generally as 'younger than c 1100'. So Lüdtke limited his dating of the beginning of Period 2 to 'no earlier than c 1100' and his dating of Fire V to c 1250 (Lüdtke 1989, 34). Thus Lüdtke did not give a close date of the periods prior to Fire V, and he did not discuss the three alternative dating proposals presented by Herteig in 1985. A study of the London ceramics by Alan Vince and Lynn Blackmore was in preparation when the 1990/91 publications were published. Herteig used the preliminary results; however, Vince only gave a general statement that the London material did not lend any support to adjustments of the fire chronology (pers. com. Vince in Herteig 1990), the alternative dates for the oldest periods were not discussed. Consequently, the material older than the end of Period 4 was still mainly dated by the same means as in 1985: two runic inscriptions, the preliminary dendro dating and counting the fire layers.

Critique of the dating of the Bryggen material

In 1990 Terje Thun and Steinar Gulliksen presented the dating results from the dendrochronological samples taken during the Bryggen excavations. They questioned Herteig´s absolute dating of the fire layer sequence, because of the diverging results given by the dendro dating (Thun and Gulliksen 1990). Herteig on his side questioned the reliability of the dendro dates and rejected the results (Herteig 1990, 15 pp.), with an ensuing discussion about the credibility of the dendro dates versus the established fire layer chronology.

At the core of the dispute between Herteig and Thun & Gulliksen, was the fact that neither Herteig nor Thun & Gulliksen could accept the great rate of reused

timber at the Bryggen site – implied by the dendro dates. In my study of Bergen about 1190 (Hansen 1994), I showed that a very high percentage of reused timber among the dated samples was realistic. An analysis of the context of the dated samples showed that there were great differences of age for logs within the same structures. In addition, the original drawings showed that many dated logs had signs of reuse. It was also shown that almost all the dated samples came from foundation structures and as such they were not representative for the building mass in general at the Bryggen site, and could not be used as a measure of general reuse at the Bryggen site (Hansen 1994, 142). This led to the conclusion that the results from the dendro dating could be used in an evaluation of the Bryggen chronology rather than being rejected (Hansen 1994, 155).

An evaluation of the absolute chronology of the Bryggen material, with an emphasis on the periods around the end of the 12th and the beginning of the 13th century, was carried out.[3] The evaluation had its origins in an analysis and discussion of the dating material and arguments presented by Herteig in favour of the fire layer chronology published in 1985 and 1990. The conclusion to this discussion was that the material and arguments seemed to support the suggested dating for the youngest periods, that is from c 1250/ the beginning of Period 5 and onwards. For the periods older than Fire V/Period 4 the arguments and dating material presented in 1985 and 1990 were very much weakened mostly because Herteig had rejected the dendrochronological material, but also because the dating value of the two runic inscriptions could be questioned.[4] After this, the evaluation of the fire layer chronology was carried out, based upon (1) the dendro dates published in 1990 (Thun and Hafsten 1990), (2) upon the study of 12 ceramic types from the Bryggen site published by Hartwig Lüdtke in 1986 and (3) upon the stratigraphical relationship between the Bryggen site and the nearby site at Dreggsalmenningen BRM 83. The conclusion of this evaluation was that due to two (three) early 13th century dendro samples and the existence of 13th century ceramics (Scarborough II and Grimston Decorated Ware) in the Period 3 material, combined with the stratigraphical relationship to 13th century layers at the neighbouring site, Period 3 should most likely be dated to the first c 30 years of the 13th century rather than to the last c 30 years of the 12th century, as proposed by Herteig in 1985 and 1990. This corresponds well with Herteig´s alternative III dating from 1985 (Hansen 1994, 39, 155).

After the evaluation in 1994, the chronological evidence for the beginning of the oldest periods on the Bryggen site, that is Period 1 and 2 was still unsatisfactory, if one wants to work in some detail with this early period of Bergen's history. In connection with my ongoing research project on the first century of Bergen's history as a town[5], it was therefore necessary to obtain better dating evidence for these early periods at the Bryggen site. The strategy was to obtain and date more

dendrochronological material.[6] The results from this dating project were on one hand very promising as Periods 1 and 2 were well represented in the new material. On the other hand, the results were also quite frustrating as it turned out that the dates for the '13th century samples' – which were one out of three arguments from my 1994 evaluation of the chronology for placing Period 3 in the 13th century – were no longer valid according to the botanists.[7] The results from the new studies made it necessary to reconsider the 1994 dating of Period 3 along with the study of Periods 1 and 2 and consequently yet another evaluation of the absolute dating for Periods 1–4 had to be done.

In part 2 a new attempt is made to date the oldest periods in the Bryggen material, through the dendrochronological material and the ceramic material.

Part 2

Methodological frame

As mentioned earlier, counting fire layers and using the number of fire layers alone while relating them to historically known fires, is an unreliable method for dating purposes. The ideal procedure when dating is first to establish a relative chronology through a stratigraphical analysis of the structures and (fire-) layers on the site. Secondly, this relative chronology can be made absolute by dating the material through artefacts, natural scientific methods, etc. And then as the last step, one may try to relate the archaeologically dated fire layers to the historically known fires, assuming that some of the archaeologically documented fires may represent a historically documented one. I will try to follow this recipe on Periods 1–4/Fire layers VIII to V from the Bryggen site.

I have chosen to work within the general framework of the relative chronology/ stratigraphical analysis of the Bryggen material published by Herteig in 1990/91. The main goal is to discuss the absolute chronology of the *periods* and the *fire layers* up to Fire V. As mentioned above, the end of Period 4 and the younger strata are fairly well dated through Lüdtke´s ceramic studies. And as I mainly need a reliable absolute date for the oldest periods in my further study, I have chosen not to deal any further with the younger material in this paper. The periods are dealt with as the main context, because at this stage of research it is not possible to discuss the phases and subphases in any detail. Where the information has been available I have also used information about phase association. The absolute dating of the beginning of the periods and fire layers that terminated them will be attempted through an analysis of dendrochronological material and ceramic mate-

rial from Periods 1–4. Other traditional means of dating such as shoe and comb typology are not drawn into the analysis as the dates given by these material groups are usually too wide to be of any use here. Finally, an attempt will be made at relating the archaeologically known fire layers to historically known fires.

The dendrochronological data

The dated samples published in 1990

During the Bryggen excavations approximately 1600 dendrochronological samples were selected for dating purposes. During the 1980s a floating chronology of 433 years was established on the basis of data from 267 matching logs (Thun and Hafsten 1990, 135). The floating chronology was initially dated by radiocarbon dating (Thun and Gulliksen 1990, 145). But in 1990 it was possible to match the floating tree ring chronology to the established tree ring chronology for south-eastern Norway. Thus, the Bryggen tree ring chronology had been given an absolute dating (Thun and Gulliksen 1990, 149).

Only 267 out of approximately 1600 samples were dated. Thun and Hafsten explain why so few samples were dated, referring to irregularities caused by different growth conditions and by the sampling system at the Bryggen excavation:

> *This may be partly ascribed to irregularities in the tree ring pattern, imposed on the trees by the differing growth conditions within the rugged coastal regions from which the trees may have come. It would probably have been easy to compensate for these irregularities if a more complete and systematic sampling had been carried out, particularly if the principle of securing an ample number of samples from each construction had been practised. (Thun and Hafsten 1990, 138).*

In fact an 'ample number' of samples *were* collected from a number of constructions according to the original dendro list, but the information on the context of the samples was only available to the scientists in a few cases. Therefore the c 1600 samples were analysed more or less 'one by one', and unfortunately with rather meagre results.

Only four out of the 267 dated samples could be safely assigned to Period 2, and none to Period 1. The vast majority of samples which could be assigned to Periods 3 to 7 came from foundation structures and seemed to consist mostly of reused timber (Hansen 1994, 142).

The new dendrochronology project

In a dendrochronology project in 1997/98 (Hansen and Reimers forthcoming), samples were taken from the large amount of constructions collected during the Bryggen excavations. Having the meagre results from the 1600 'old' dendro samples in mind, two main principles were followed when taking new ones: (1) To judge each piece of wood carefully to see if it had signs of reuse, surface work or wear that would make the date provided by the sample unsafe to use without further discussion. (2) To take several samples from each construction, in order to optimise the possibilities for valid results. Having done this with good results, we went through the 1600 'old' samples and collected information on period, construction type, and where possible on construction number for approximately 700 of the samples.[8] These procedures made it possible to reconstruct 'an ample amount' of samples from each stratigraphical level. On the whole, 853 samples from the Bryggen site were studied, and we ended up with 392 dated samples, of which 239 samples come from Periods 1–4. The samples were dated by Terje Thun at the University in Trondheim (NTNU). The new samples that were taken in 1997/98 have all been studied and judged with regard to missing tree rings and also to evaluate the issue of reuse. Often the structures had no clear signs of reuse, but in many cases only fragments of the original building element was preserved, so signs of reuse may have been lost. Posts or other structural elements may also have had the same function through several phases and over a long time span, thus leaving no traces of reuse. As for the samples taken during the excavations, no information on reuse or missing tree rings has been documented.

Dating through dendrochronological samples

If a dendro sample is taken from a piece of wood that has not been reused and has intact outer tree-rings, it provides a very reliable post quem date for the construction of the structure it came from. Thus dendrochronological material can give us post quem evidence for when a building was erected or a period began. The material can also provide indications of how long building activity continued within a certain period. When a sample comes from a reused piece of wood, it is crucial for the interpretation of the date that we are able to verify how many times the piece of wood was reused before it ended up in its final context. If for instance we can document that the piece of wood was reused only once, the sample can be used to date activities in the preceding phase. However, this type of information is seldom available in archaeological contexts. Interpretations of this kind have to rely on more or less educated guesses, based on for instance general patterns in the material from the actual site. Still, if such patterns are present, we may use samples from one period to indicate when building activity was still going on in previous periods.

The dated samples will now be discussed in order to establish a more solid basis for an absolute chronology for Periods 1–4. The samples from each period will be discussed in order to throw light upon the following questions: Can the samples indicate how long activity went on in previous periods? Can the samples date the beginning of the period they were found in, and can they show how long building activities went on in this period?

Samples from Period 1

At the site, remains of at least three groups of structures older than Period 2 were recognised and assigned to Period 1. In the middle part of the site, posts and post-holes from a raised passage or jetty were assigned in general to Period 1. In the north-eastern part of the site posts and post holes, some of which may stem from a building (Building 497), and traces of an enclosure fence were documented as belonging to Phase 1.1. Building 45, which was clearly defined west of this fence, was assigned to 1.2 (Herteig 1991a, 92).

Eight samples come from Period 1 (table 1). Two are from the jetty, one from a post within the fence in Phase 1.1 and six are from building 45 in Phase 1.2. The two oldest samples dated to 1026 and 1029 were taken from posts in the jetty; the samples were taken in 1997/98. The posts had signs of reuse, so they probably come from an older construction and cannot be used to date the beginning of Period 1. Still, they may indicate that building activity took place in the vicinity as early as about 1029. Sample 1537/1069 was taken from a post during the excavations, situated inside the fence that surrounds building 497. Terje Thun describes the sample as being of good quality, but we do not know if tree-rings are missing, or if the post has been reused. The post has not been assigned to a specific

Table 1. The dated samples from Period 1.

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
1.	JETTY		1026	93029
1.	JETTY		**1029**	93028
1.1	POST		**1069**	1537
1.2	BUILDING	045	1100	92717
1.2	BUILDING	045	1107	92705
1.2	BUILDING	045	1108/09	92714
1.2	BUILDING	045	1109	92704
1.2	BUILDING	045	**1110**	92716

The samples are ranked by phase, structure and age within the structure.
Numbers in bold-face show the youngest date within a structure.
Dendro. no from 112 to 89664 were taken during the excavations, numbers from 90032 to 95065 were taken by Hansen and Reimers 1997/98.

Table 2. The dated samples from Period 2 (continuing next page).

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
2.0	BUILDING	066	1024	92786
2.0	BUILDING	066	**1040**	92785
2.0	BUILDING	042	**1078**	1155
2.0	BUILDING	498	**1122**	1110
2.0	BUILDING	482	1116	1517
2.0	BUILDING	482	1120	1518
2.0	BUILDING	482	1120	1515
2.0	BUILDING	482	1124	1516
2.0	BUILDING	482	**1125**	1514
2.0	BUILDING	402	1123	1474
2.0	BUILDING	402	1125	1476
2.0	BUILDING	402	1128	1478
2.0	BUILDING	402	**1128**	1479
2.0	BUILDING	130	1112	1466
2.0	BUILDING	130	1117	1471
2.0	BUILDING	130	1128	1469
2.0	BUILDING	130	**1129**	1470
2.0	BUILDING	038	1100	91006
2.0	BUILDING	038	1104/05	92542
2.0	BUILDING	038	**1141**	1325
2.0	BUILDING	040	1103	1075
2.0	BUILDING	040	**1149**	1170
2.0	PASSAGE		**1029**	1427
2.0	PASSAGE		**1124**	1512
2.0	CAISSON	029	1074	92936
2.0	CAISSON	029	**1104**	92935
2.0	CAISSON	027	**1106**	1415
2.0	CAISSON	028	1098	93039
2.0	CAISSON	028	**1108/09**	93040
2.0	CAISSON	026	**1120**	1413
2.0	CAISSON	025	1083	93054
2.0	CAISSON	025	**1121/22**	93053
2.0	CAISSON	041	**1126**	1454
2.0	CAISSON	038	1138/39	92914
2.0	CAISSON	038	**1138**	92916

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
2.0	QUAY STRUCTURE		**1124**	1535
2.0	QUAY STRUCTURE		**1124/25**	92907
2.0	QUAY STRUCTUER		**1125**	1382
2.0	QUAY STRUCTURE		**1126**	1253
2.0	QUAY STRUCTURE		**1129**	1254
2.0	QUAY STRUCTURE		**1135**	1395
2.0	QUAY STRUCTURE		**1138**	1398
2.0	LADDER		**1149**	92909
2.0	STRUCTURE		**1113**	1485
2.0	STRUCTURE		**1123**	1484
2.0	STRUCTURE		**1123**	1449
2.0	STRUCTURE		**1124**	1480
2.0	STRUCTURE		**1124**	1459
2.0	STRUCTURE		**1124**	1513
2.0	STRUCTURE		**1128**	1468
2.1	BUILDING	044	1100	92687
2.1	BUILDING	044	1100	92689
2.1	BUILDING	044	1080	92688
2.1	BUILDING	044	**1108**	92685
2.2	BUILDING	041	1127	92832
2.2	BUILDING	041	1130	92835
2.2	BUILDING	041	1133	92836
2.2	BUILDING	041	1134	92696
2.2	BUILDING	041	**1135**	92694

The samples are ranked by phase, structure and age within the structure.

Numbers in bold-face show the youngest date within a structure.

Dendro. no from 112 to 89664 were taken during the excavations, numbers from 90032 to 95065 were taken by Hansen and Reimers 1997/98.

construction, therefore it is difficult to be too conclusive about its dating value, nevertheless it is *there*, and it gives a decent indication that there was building activity here some time after 1069.

The youngest sample comes from building 45, Phase 1.2, it was taken in 1997/98. The log showed no sign of reuse and the outer tree-rings seemed to be intact. Samples from five elements in building 45 were dated. They all come from trees felled in the years between 1100 and 1110. The close dates also give a very good indication that new timber was used when constructing building 45, and that Phase 1.2 began shortly after 1110. Consequently Fire VIII, the fire which destroyed building 45, must have occurred after 1110.

To sum up, two samples from reused wood indicate building activity in the vicinity of the Bryggen site already as early as about 1029. One sample from a post assigned to Phase 1.1 shows building activity at the Bryggen site at the latest from 1069. The post has not been assigned to any particular construction. Samples from Phase 1.2 give very good indications that Fire VIII occurred at least some time after 1110.

Samples from Period 2

In Period 2, oblong plots perpendicular to the waterfront characterise the built-up area. Two phases of structures were found in some parts of the site. The first structures built on a plot and were not replaced by new structures during the period have been assigned to Phase 2.0. Structures that were first built on a plot and were replaced by later structures during the period are assigned to 2.1, and the structures that replaced older ones from Period 2 are assigned to 2.2. A total of 59 samples have been dated to Period 2 (table 2), of which 50 come from 2.0. Four samples are taken from building 44 from Phase 2.1, and five come from building 41, assigned to Phase 2.2. Building 41 overlapped building 44. The samples range from 1024 to 1149.

When looking at the youngest sample within each construction we see that building material from building 66 and 42 date back to the 11th century. The sample from building 42 was taken during the excavations. Information about the condition of the sample is no longer available, so this date is difficult to discuss. The samples from building 66, however, were taken in the new dendro-dating project from posts without signs of reuse and with the outer tree-rings intact. Two explanations can be given as to the early dates. (1) The wood may have been reused after all, or (2) building 66 was not affected by Fire VIII and survived into Period 2. I shall return to this question later.

The youngest sample from building 44 in Phase 2.1 (92685) was taken from a post that was most likely reused as it had a groove that made no sense in the construction where it was found. Moreover, the post was in a bad condition and tree-rings were most likely missing. Therefore, this sample can only provide a wide post quem date for building 44, and thus for the beginning of Period 2 to after 1108 .

If we look at the other dated structures from Period 2, three small stone-filled caissons 27, 28, and 29 provided dates ranging from 1104 to 1108. Furthermore, three caissons 25, 26 and 41 were dated from 1120 to 1126 and caisson 38 was dated to 1138. Most of the samples from these constructions were taken during the 1997/98 project. None of the samples showed signs of reuse and most of them had the outer tree-rings intact, I therefore consider them reliable. Buildings 498, 482, 402, and 130 were built in wood felled during the 1120s. Building 41 was built in

wood felled in the 1130s and Buildings 38 and 40 were built in wood felled in the 1140s. One sample dated to 1149 was taken from a ladder; it appeared to have intact outer tree-rings. Sixteen samples came from quay structures, passages and other structures. Their dating range was wide, nearly a hundred years from 1029 to 1138, the bulk of the samples had dates between 1123 and 1128, and a few in the 1130s. Most of the samples from these buildings, quay structures, passages and other structures were taken during the excavations, so their condition is not known. However, if we consider the question of reuse, Period 2 represents the first major construction activity in this part of medieval Bergen. This probably means that there cannot have been much material available from former buildings and structures prior to Period 2. Viewed against this background I think we may assume that the majority of the samples from Period 2 were taken from new timber. If this is the case, we may divide the structures into series representing several expansions of the built-up area:

The oldest series stems from building 66, which was possibly erected some time after 1040. In that case, it cannot have been affected by Fire VIII and is a building 'relic' from Period 1. The idea that building 66 should have survived Fire VIII is not so farfetched since this fire was not documented in this part of the site. Furthermore, building 66 was not preceded by other structures on its plot (Herteig 1991a, 86p., 92). Speaking in terms of relative chronology, it represents the oldest building recognised in this part of the site. Consequently, it may have been constructed in Period 1 and survived into Period 2. Whether building 66 actually was *erected* shortly after 1040, as indicated by the youngest sample, is another matter. Two samples were taken from building 66 in the 1997/98 project, they were dated to 1024 and 1040, and they were taken from posts where only the bottom parts remained, so we did not have full posts to judge the issue of reuse from. Therefore, although we did not *see* signs of reuse on the remains, the posts may of course still have been reused. The fact that there was a 16-year age difference between the two posts may in fact be an indication that the material initially came from other structures. The question of when building 66 was erected cannot be answered at this stage of research. However, it is likely that it was erected before Fire VIII and survived into Period 2. From a stratigraphical point of view this is also possible. If this is the case, it has no consequences for the overall understanding of the chronology of the site.

The next series is made up of the three caissons dated to the first decade of the 12th century. Caisson 29 has an estimated date to as early as 'after 1104' if the youngest sample is valid, however, caisson 29 is stratigraphically above building 45 from

Phase 1.2 (Herteig 1991a, 96) which was erected after 1110. Consequently, caisson 29 must also have been erected after 1110, or rather somewhat later. With this in mind it makes more sense to see the three oldest caissons in relation to the bulk of dated structures: the buildings, caissons and other structures which are dated to the 1120s and the early years of the 1130s. Altogether, these dated structures show that the first major construction activity in Period 2 was carried out in the late 1120s and early 1130s.

The third series of dates show that new buildings were still erected during the next two or tree decades. In one case (among the dendro-dated structures), one building replaces another: after 1135, building 41 replaces building 44. Buildings 38 and 40 provided samples dated to 1141 and 1149. The ladder, which was dated to after 1149, also shows activity in Period 2 in the years after 1149.

To sum up, dendro samples assigned to Period 2 show that one building may have survived from Period 1 to 2. The main activity in Period 2, however, first started in the 1120s, with a second wave of building activity in the late 1140s (after 1149). From the Period 2 dendro evidence it is not possible to determine when this period ended. However, we can conclude that Fire VII, which terminated Period 2, must have occurred after 1149.

Samples from Period 3

The structures in Period 2 were destroyed in Fire VII. Extensive building activity started after this. The waterfront was filled in and extended or adjusted and buildings were erected closer to the waterfront. There were two phases of buildings on most parts of the site, although some structures appear to have lasted the whole period (Herteig 1991a, 100). The first generation of structures belongs to Phase 3.1, the second to Phase 3.2. I have assigned structures that lasted during the whole period, to 3.0. All in all, 87 dendro samples from Period 3 were dated (table 3). Nineteen samples came from Phase 3.1 and 56 from Phase 3.2, leaving 12 from 3.0. The dates from Phase 3.1 range from 1095 to 1174 with the bulk between 1132 and 1149. The samples from Phase 3.2 range from 1120 to 1178/79 with the bulk between 1159 and 1178. The samples from Phase 3.0 range from 1067 to 1159, with the bulk between 1126 and 1159.

Ideally, the samples from Phase 3.1 and 3.0 should provide solid dating evidence for determining when building activity in Period 3 began, and samples from Phases 3.2 should ideally provide evidence for dating the secondary building activity in the period, thus indicating the duration of the period. Seventyseven of the 87 dated samples were taken during the excavations and their condition as far as signs of reuse and missing tree-rings are concerned, has not been recorded during the

Table 3. The dated samples from Period 3 (continuing next two pages).

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRONO
3.0	BUILDING	475	**1069**	1071
3.0	BUILDING	028	**1126**	1165
3.0	BUILDING	137	**1135**	90764
3.0	BUILDING	135	1067	1039
3.0	BUILDING	135	1138	1042
3.0	BUILDING	135	**1139**	1046
3.0	SUB STRUCTURE	019	1143	1369
3.0	SUB STRUCTURE	019	1143	1352
3.0	SUB STRUCTURE	019	1144	1345
3.0	SUB STRUCTURE	019	**1144**	1373
3.0	SUB STRUCTURE	128	**1159**	941
3.0	SUB STRUCTURE		**1129**	339
3.1	BUILDING	478	**1115**	91286
3.1	PASSAGE		**1136**	944
3.1	PASSAGE		**1137**	946
3.1	PASSAGE		**1144**	1029
3.1	PASSAGE		1149	90693
3.1	PASSAGE		**1174**	90692
3.1	SUB STRUCTURE	084	**1095**	89664
3.1	SUB STRUCTURE	089	1114	95064
3.1	SUB STRUCTURE	089	**1132**	95065
3.1	SUB STRUCTURE	127	1144	1045
3.1	SUB STRUCTURE	127	1146	1024
3.1	SUB STRUCTURE	127	**1146**	1252
3.1	SUB STRUCTURE	113	1133	1564
3.1	SUB STRUCTURE	113	1134/35	93018
3.1	SUB STRUCTURE	113	1147	1520
3.1	SUB STRUCTURE	113	1149	1523
3.1	SUB STRUCTURE	113	**1151**	1524
3.1	STRUCTURE		**1123**	1031
3.1	STRUCTURE		**1138**	88388
3.2	BUILDING	473	**1129**	1386
3.2	PASSAGE		**1136**	933
3.2	PASSAGE		**1139**	1529
3.2	SUB STRUCTURE	077	**1120**	90480
3.2	SUB STRUCTURE	144	**1138**	692
3.2	SUB STRUCTURE	001	**1160**	1289
3.2	SUB STRUCTURE	015	**1162**	1365

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRONO
3.2	SUB STRUCTURE	017	1129	1340
3.2	SUB STRUCTURE	017	1162	1339
3.2	SUB STRUCTURE	017	**1162**	1342
3.2	SUB STRUCTURE	015	**1163**	1366
3.2	SUB STRUCTURE	006	**1164**	1281
3.2	SUB STRUCTURE	130	**1165**	995
3.2	SUB STRUCTURE	009	**1165**	1368
3.2	SUB STRUCTURE	003	1164	1308
3.2	SUB STRUCTURE	003	**1165**	1302
3.2	SUB STRUCTURE	004	1164	1306
3.2	SUB STRUCTURE	004	1165	1305
3.2	SUB STRUCTURE	004	**1165**	1307
3.2	SUB STRUCTURE	005	**1165**	1321
3.2	SUB STRUCTURE	072	1171	594
3.2	SUB STRUCTURE	072	**1172**	599
3.2	SUB STRUCTURE	114	1134	929
3.2	SUB STRUCTURE	114	1167	684
3.2	SUB STRUCTURE	114	1168	928
3.2	SUB STRUCTURE	114	1168	902
3.2	SUB STRUCTURE	114	1169	904
3.2	SUB STRUCTURE	114	1169	900
3.2	SUB STRUCTURE	114	1169	938
3.2	SUB STRUCTURE	114	1170	688
3.2	SUB STRUCTURE	114	**1172**	691
3.2	SUB STRUCTURE	054	1169	231
3.2	SUB STRUCTURE	054	1171	232
3.2	SUB STRUCTURE	054	**1173**	337
3.2	SUB STRUCTURE	123	1177	572
3.2	SUB STRUCTURE	123	**1177**	574
3.2	SUB STRUCTURE	111	1141	779
3.2	SUB STRUCTURE	111	1159	1448
3.2	SUB STRUCTURE	111	1165	709
3.2	SUB STRUCTURE	111	1165	713
3.2	SUB STRUCTURE	111	1165	751
3.2	SUB STRUCTURE	111	1165	1438
3.2	SUB STRUCTURE	111	1166	696
3.2	SUB STRUCTURE	111	1167	700
3.2	SUB STRUCTURE	111	1171	708
3.2	SUB STRUCTURE	111	1172	703

PERIOD	CONSTRUCTION	NO	FELLING YEAR	DENDRONO
3.2	SUB STRUCTURE	111	1173	716
3.2	SUB STRUCTURE	111	1173	608
3.2	SUB STRUCTURE	111	**1178/79**	90472
3.2	QUAY		1142	1319
3.2	QUAY		1162	1291
3.2	QUAY		1164	1296
3.2	QUAY		1172	606
3.2	QUAY		1177	402
3.2	POST		1129	1221
3.2	OTHER STRUCTURE		1052	1191

The samples are ranked by phase, structure and age within the structure.

Numbers in bold-face show the youngest date within a structure.

Dendro. no from 112 to 89664 were taken during the excavations, numbers from 90032 to 95065 were taken by Hansen and Reimers in 1997/98.

excavations. As mentioned earlier, I have in a previous study analysed the aspects of reuse in the dated samples from the Bryggen excavations (Hansen 1994, 137pp). My conclusion then was that there was apparently a very high percentage of reused wood among the published samples from Periods 3 to 7 (Hansen 1994, 137).

Fourtynine of the 87 samples from Period 3 were published in 1990. These samples are most likely of reused material, 29 samples were 'old' samples, which were dated through the new dendro project, and these samples are also likely to come from reused material, as they are in no respect different from the samples that were published in 1990. Only 9 samples were taken during the 1997/98 project. Most of these samples are afflicted with problems like missing tree-rings due to surface work and obvious signs of reuse. The samples from Period 3 must therefore be analysed and discussed in the light of this. In addition we must consider the possibility that some of the samples could actually come from new timber. If reused, we do not know how many times the timber was reused. The samples from reused wood, however, have the potential of showing when activity was still going on in previous periods and phases. Furthermore, the youngest samples may provide a wide post quem date for when Period 3 was terminated. If some of the samples come from new timber, they may provide dates for the beginning of Period 3 and for ongoing activity in the period.

With these general premises in mind we will take a closer look at the samples from Phase 3.1 and 3.0 in order to throw light upon the date of Fire VII, which marked the termination of Period 2 and the beginning of Period 3. The oldest

samples from Phase 3.1 and 3.0 are taken from reused material, probably from the Period 2 structures, as the dates correspond very well with the dendro dates from Period 2. As we have seen, the samples from Period 2 showed that activity lasted up until 1149 or later. Sample 90692 from Phase 3.1 stands out by being several years younger than the bulk of the samples. The sample was dated to 1174. If this sample comes from reused material, it indicates that Period 2 lasted into the 1170s, however, if the sample represents new material, it dates the beginning of period 3 into the 1170s or later. This needs further discussion.

The crucial sample was taken from a passage during the 1997/8 project. It was taken from a relatively thin log with only 31 tree rings. Terje Thun, therefore, had methodological reservations when dating the sample. In his report he concluded that the sample corresponds well with a date of 1174, but as there are only 31 tree rings, the sample cannot be considered totally reliable and should ideally be supported by other dates. The log showed no signs of reuse. However, from the same structural element in the passage, another sample was taken and dated to 1149. This piece of wood showed no signs of reuse either. The fact that one element is 25 years older than the other may indicate that the structure was made of wood from various sources, which again may indicate reuse. We have to conclude that there are indications that Period 3 started in the early 1170s, but as the crucial sample is vitiated by methodological problems the dating evidence of the sample alone is too weak to date Fire VIII.

Can the samples from Phase 3.2 indicate when Phase 3.2 began? And can they throw light upon the question of the beginning of Period 3? Can they indicate how long activity lasted in Period 3? First of all we must discuss whether all the samples stem from reused timber. The oldest samples are undoubtedly from reused material, as their dates correspond very well with the dates from Period 2. But what about the youngest samples? Many samples from Phase 3.2 stem from foundation substructures. The youngest samples in several substructures are dated to the 1160s and 1170s. The youngest sample in Phase 3.2 is dated to 1178/79, it is quite representative for the other foundation substructure samples from the phase. It was taken during the 1997/98 project, so I will use it as an example. The sample was taken from one of the timber junctions in the log-built foundation substructure 111. Only about half a metre of the end of the log was preserved and the fragment showed no signs of former use. However, when looking at the drawing of this substructure, the log was much shorter than the corresponding logs in the same timber junction. This indicates that the logs came from different sources and that they may have been used in other contexts before they ended up in foundation substructure 111. The samples from foundation substructure 111 have dates rang-

ing from 1141 to 1178/79. This time span also indicates that the wood was reused. Therefore, the 1178/79 sample as well as other samples from similar foundation substructures in Period 3.2 probably come from reused wood. This means that they cannot be used to date the beginning of Phase 3.2. I will therefore consider whether the samples can be used to date the beginning of Period 3.

It would be quite natural to think that some of the samples from Phase 3.2 stem from logs which were reused just once. If this was the case, the logs would have been used for the first time in Phase 3.1. If we consider this possibility, the youngest samples from Phase 3.2 would date the start of activity in Period 3 to the late 1160s or early 1170s, and place the termination of Period 2 accordingly to the late 1160s or early 1170s. This would be in accordance with the fact that none of the samples found in Period 2 are dated to after 1149. This would also be in accordance with the 1174 sample from 3.1, assuming that the date of this sample can be trusted and that the sample does not stem from reused timber. On the other hand, if the 1174 sample from Phase 3.1 does stem from reused timber, and the youngest samples from 3.2 stem from logs reused more than once, then the material would show that activity was still going on beyond 1174 in Period 2. This would give the beginning of Period 3 a wide post quem date of after 1174. Both alternative dating suggestions involve several assumptions, as we do not know how many times the logs were actually reused before they ended up in their final context, and the reuse factor in general makes the evaluation of the samples rather difficult. However, a pattern may be discerned. If the youngest samples from Phase 3.2 are reused only once, they *do* correspond very well with the 1174 sample from Phase 3.1, and the 1174 sample *does* stand out as being quite a bit younger than the rest of the samples from Phase 3.1 and 3.0. This again is in accord with the fact that the youngest sample actually found in Period 2 is dated as early as 1149. But regardless of the problems of reuse, the youngest sample in 3.2 does show clearly that Fire VI, which terminated Period 3, must have occurred after 1178.

To sum up, the dendro samples from Period 3 do not provide a waterproof date for Fire VII, which marked the termination of Period 2 and the beginning of Period 3. There are two possible dating alternatives for the end of Period 2 and the beginning of Period 3. (1) Excluding the possibility of reuse for the youngest sample from Phase 3.1, and presuming that the youngest samples from Phase 3.2 were reused only once, the dendro samples indicate that building activity in Period 3 started in the late 1160s or at the latest about 1174. Period 2 ended accordingly in the late 1160s or early 1170s. (2) If the samples from Period 3 all come from reused timber and the samples from 3.2 were reused more than once, then the samples from Period 3 imply that Period 2 lasted beyond 1174. This gives the beginning of

Period 3 a wide post quem date of after 1174. Weighing the pros and cons, I would stress the patterns discerned in the material – they support the first alternative rather than the second. However, both alternatives will be considered when discussing the dendro dates against the dates provided by the ceramic material. What is certain is that the dendro samples provide us with a wide post quem date for Fire VI, which terminated Period 3, that is, 'after 1178/79'.

Samples from Period 4

Buildings from Period 3 were destroyed by Fire VI. After the fire, structures in Period 4 were built. In some parts of the site, there were two phases of structures. The structures that belong to the level that was built first are assigned to Phase 4.1, and the structures that belong to the second level are assigned to Phase 4.2. Structures from areas with only one layer of structures are assigned to 4.0.

Altogether, there were 85 dated samples from Period 4 (table 4), of which 64 were published in 1990; the remaining 11 samples were also taken during the excavations but they have not been dated until now. The samples from Period 4 published in 1990 appeared to be highly afflicted by reused timber. The samples published in 1990 are representative for the 11 'new' samples as well. We can therefore be quite certain that the samples stem from reused timber. Many of the samples from Period 4 have not been assigned to a numbered foundation substructure because not all substructures from this period were numbered in the publication of the buildings at the Bryggen site (Herteig 1990 and 1991).

The samples from Phases 4.1 and 4.0 span widely from the 11th century to 1188. The oldest samples probably stem from wood that was first used in Period 2 or even before. The youngest samples from Phase 4.1 and 4.0 are dated to the last part of the 1180s. As they obviously represent reused timber, they cannot date the beginning of Period 4. The question then is, can they throw light upon when activity began or took place in the preceding Phase 3.2? If the logs were reused only once they would originally stem from Phase 3.2. If this premise is valid, they can provide an approximate date for the beginning of Phase 3.2 to the late 1180s. However, if the logs were reused more than once, they cannot be used for dating the preceding phase. The youngest samples from Phase 4.2 are from the late 1190s, and one sample dates to 1201, these samples are also quite certainly taken from reused wood. If, however, the timber were new in the preceding Phase 4.1, the samples would date the beginning of Period 4 to around 1200. If the logs were reused more than once, the samples cannot date the beginning of Period 4.

The methodological problem from the Period 3 samples is repeated when dealing with the samples from Period 4. Again, we cannot know how many times the logs

Table 4. The dated samples from Period 4 (continuing on next two pages).

PERIODE	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
4.0	BUILDING	466	1178	905
4.0	SUB STRUCTURE	058	1173	364
4.0	SUB STRUCTURE	059	1171	368
4.0	SUB STRUCTURE	117	1153	1295
4.0	SUB STRUCTURE	117	1162	1286
4.0	SUB STRUCTURE	117	1168	802
4.0	SUB STRUCTURE	117	1178	820
4.0	SUB STRUCTURE	117	1179	801
4.0	SUB STRUCTURE	117	1187	804
4.0	SUB STRUCTURE		1114	525
4.0	SUB STRUCTURE		1149	527
4.0	SUB STRUCTURE		1160	335
4.0	SUB STRUCTURE		1167	523
4.0	SUB STRUCTURE		1167	505
4.0	SUB STRUCTURE		1169	509
4.0	SUB STRUCTURE		1169	508
4.0	SUB STRUCTURE		1169	332
4.0	SUB STRUCTURE		1170	517
4.0	SUB STRUCTURE		1172	333
4.0	SUB STRUCTURE		1180	512
4.0	SUB STRUCTURE		1181	515
4.0	SUB STRUCTURE		1181	514
4.0	SUB STRUCTURE		1188	522
4.0	SUB STRUCTURE		1188	518
4.0	SUB STRUCTURE		1188	511
4.0	SUB STRUCTURE		1195	620
4.0	SUB STRUCTURE		1196	650
4.0	STRUCTURE		1167	1214
4.0	STRUCTURE		1171	397
4.0	STRUCTURE		1181/82	90534
4.1	BUILDING	117	1174	1201
4.1	SUB STRUCTURE	074	1044	663
4.1	SUB STRUCTURE	074	1167	656
4.1	SUB STRUCTURE	075	1144	622
4.1	SUB STRUCTURE	075	1167	639
4.1	SUB STRUCTURE	075	1168	625
4.1	SUB STRUCTURE	121	1170	893
4.1	SUB STRUCTURE	125	1173	894
4.1	SUB STRUCTURE		1063	555

PERIODE	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
4.1	SUB STRUCTURE		1138	685
4.1	SUB STRUCTURE		1165	530
4.1	SUB STRUCTURE		1165	680
4.1	SUB STRUCTURE		1167	687
4.1	SUB STRUCTURE		**1168**	686
4.1	SUB STRUCTURE		**1168**	554
4.1	SUB STRUCTURE		**1170**	679
4.1	SUB STRUCTURE		**1171**	564
4.1	SUB STRUCTURE		**1172**	560
4.1	SUB STRUCTURE		**1172**	562
4.1	SUB STRUCTURE		**1172**	669
4.1	SUB STRUCTURE		**1177**	540
4.1	SUB STRUCTURE		**1181**	541
4.1	SUB STRUCTURE		**1184**	553
4.1	SUB STRUCTURE		**1185**	536
4.1	SUB STRUCTURE		**1187**	535
4.1	SUB STRUCTURE		**1187**	529
4.1	SUB STRUCTURE		**1188**	567
4.1	SUB STRUCTURE		**1188**	537
4.1	SUB STRUCTURE		**1188**	538
4.1	SUB STRUCTURE		**1188**	548
4.1	SUB STRUCTURE		**1188**	552
4.1	SUB STRUCTURE		**1188**	556
4.1	SUB STRUCTURE		**1188**	566
4.2	BUILDING	231	**1168**	88907
4.2	BUILDING	470	1146	1261
4.2	BUILDING	470	1166	1563
4.2	BUILDING	470	**1198**	1202
4.2	BUILDING	474	**1198**	1206
4.2	SUB STRUCTURE	092	**1173/74**	90032
4.2	SUB STRUCTURE	100	1144	240
4.2	SUB STRUCTURE	100	1180	239
4.2	SUB STRUCTURE	100	1181	238
4.2	SUB STRUCTURE	100	1181	237
4.2	SUB STRUCTURE	100	1181	235
4.2	SUB STRUCTURE	100	**1189**	242
4.2	SUB STRUCTURE	119	1187	568
4.2	SUB STRUCTURE	119	1188	570
4.2	SUB STRUCTURE	119	1199	494

PERIODE	CONSTRUCTION	NO	FELLING YEAR	DENDRO NO
4.2	SUB STRUCTURE	119	1199	499
4.2	SUB STRUCTURE	119	1199	497
4.2	SUB STRUCTURE	119	1200	501
4.2	SUB STRUCTURE	119	1200	493
4.2	SUB STRUCTURE	119	1200	495
4.2	SUB STRUCTURE	119	**1201**	492
4.2	SUB STRUCTURE		**1158**	996

The samples are ranked by phase, structure and age within the structure.

Numbers in bold-face show the youngest date within a structure.

Dendro. no from 112 to 89664 were taken during the excavations, numbers from 90032 to 95065 were taken by Hansen and

were used before they ended up in the foundation substructures. The older samples from Period 4 may stem from Period 2 and some even go back to the 11th century. This shows that many logs lived through several phases before they eventually ended up in the foundation substructures. It demonstrates that we cannot exclude that even the youngest logs from Period 4 may also have been reused more than once. On the other hand, we cannot reject the possibility that some logs were reused only once. And the first alternative does correspond with the same pattern as seen in the first dating alternative provided by the Period 3 samples.

To sum up: The dendro samples from Period 4 give us two alternatives for when activity started in Phase 3.2 and when Period 4 began. (1) If the youngest samples from Period 4 were only reused once, the samples from Phase 4.1 and 4.0 date the beginning of the preceding Phase 3.2 to the late 1180s and the end of Phase 3.2/ beginning of Period 4 to the late 1190s or the early 1200s. (2) If the samples were reused more than once they cannot be used to date the start of activities in Phase 3.2 or the beginning of Period 4. I tend to favour alternative 1 because this alternative falls into the same pattern of reuse as seen in the dendro samples from Period 3. However, as this argument is based on assumptions on several levels, it cannot be given too much value. However, the samples from Period 4 can regardless of the reuse problems provide a wide post quem date for Fire V to after 1201.

Summary of the dates provided by the dendrochronological material

To sum up, two Period 1 samples from reused timber indicate that there was building activity prior to Period 1 in the vicinity of the Bryggen site already as early as around 1029. The dendro evidence provides some indications for the beginning of activity at the Bryggen site in Period 1. One sample from Period 1 was dated to

1069, although this sample does not come from a documented context, its presence still shows building activity at the latest from about 1069. The post quem date from the beginning of Period 1.2 to 'after 1110' is very reliable. There is also solid evidence that the main expansion in Period 2 took place in the 1120s and 1130s. Period 2 therefore seems to begin around 1120. According to the youngest samples found in Period 2, there were still building activities at the site about 1149. This is also seen through the oldest dates from Periods 3 and 4. The samples from Period 3 provide us with two possible dating alternatives for the end of Period 2 and the beginning of Period 3. (1) Excluding the possibility of reuse for the youngest sample from Phase 3.1, and presuming that the youngest samples from Phase 3.2 were reused only once, the dendro samples indicate that building activity in Period 3 started in the late 1160s or at the latest about 1174. Period 2 ended accordingly in the late 1160s or early 1170s. (2) If the samples from Period 3 all come from reused timber and the samples from 3.2 were reused more than once, the samples from Period 3 imply that Period 2 lasted beyond 1174. This gives the beginning of Period 3 a wide post quem date of after 1174. General patterns in the material appear to lend more support to the first alternative than to the second. However, both alternatives will be judged against the evidence from the ceramic material. The youngest sample from Period 3 provides a wide post quem date for Fire VI that terminated Period 3: 'after 1178/79'.

The samples from Period 4 give two possible dating alternatives for the beginning of Phase 3.2 and the beginning of Period 4. (1) If the youngest samples from Period 4 were only reused once, they date the beginning of the preceding Phase 3.2 to the late 1180s and the beginning of Period 4 to the late 1190s or the early 1200s. (2) If the samples were reused more than once they cannot date the end of Period 3 or the beginning of Period 4 and can only provide us with a wide post quem date for Fire V to after 1201. It is hard to ignore that alternative 1 suggested by the Period 4 material corresponds with the pattern suggested by the first alternative from the Period 3 material. However, both alternatives will be judged against the evidence from the ceramic material.

We will now turn to the ceramic material and see if the sherds can support or reject the results we have achieved so far.

The ceramic material

Background

In 1989 Lüdtke published a study of 12 ceramic types found at the Bryggen site. The study was based on the information available in the databases on the Bryggen

site material up until 1986 and on information from Herteig. There was a number of methodological problems attached to the material (Lüdtke 1989, 20), this makes it difficult to trust the *details* of the results for the oldest material. This is especially problematic because the sherds that can be used as crucial leading artefacts are relatively few in numbers in the early periods. Furthermore, some of the ceramics types that were not included in Lüdtke's study are interesting for the discussion of the chronology of the oldest periods. I have therefore analysed *all the ceramic material* found in Periods 1 to 4, based upon a *revised and updated* version of the databases from the Bryggen material. The reader is referred to the excursus for the details on how the updated database was worked out.

Excursus

The databases

The relevant information on ceramic and other finds from the Bryggen site is found in three databases called 'H-post', 'C-post' and a Ceramics database[9]. 'H-post' contains context information for each 'bag' of finds from the excavation: location in space and time. Each 'bag' of finds has been assigned a line number (*Lnr*) in H-post. C-post contains the initial typification of the finds from each 'bag' or Lnr. In C-Post each find has been assigned an accession number *Tnr.* Some of the Tnr contain more than one object, there may for instance be more than one ceramic sherd under a Tnr. The Ceramics Database contains the results of the visual typologisation of the ceramic material carried out by archaeologists Ian Reed and Rory Dunlop in the early 1980s.

Originally, the H-post database contained the field information on the location in space and time of the finds. However, during the long lasting excavations the system of numbering constructions changed. During the excavations structures were described in relation to fire layers where these could be found. As described above, one counted the fire layers as they turned up. H-post originally contained the field interpretation and thus the 'field' numbering of the fire layers, which were not given unique numbers but were labelled Fire 1 to 7 for each excavation unit.[10] Thus Fire 7 was not necessarily the same in two different excavation units, but it was punched as 7 in the H-post database.

During the 1980s a great effort was put into updating the H-post database with amongst others the unique building numbers and a uniform fire-layer numbering system. By the end of 1990, the part of the database that covers *half the site* had been updated, and it contained construction numbers and fire layer numbers according to Herteig's publications from 1990 and 1991. However, for the other half of the site the H-post database has not yet been updated. A small number of the line numbers may have been updated, as they were particularly important to specialists who wished to work with artefact groups from the Bryggen material (Herteig 1991b).[11] But these corrections have not been systematically documented, so it is not known which data in this half of H-post are updated and which are not.

In order to be able to work in some detail with the oldest periods of the Bryggen material, I have made an updated version of the H-post database. This updated version is the base of my study of the Bryggen material. I have studied the material relevant for Periods 1–4.

The aim was to extract all lines assigned to Phases 1–4 in H-Post. Several selections were made in order to catch up the relevant Lnrs:

1) Lnrs with the value *in* (I) or *under* (U) Fire V in the updated half of the H-post and the Lnrs with the values *in* or *under* Fire IV in the other half of the database.
2) The Lnrs which were assigned to Periods 1–4.
3) The Lnrs that had a reference to a construction number that according to Herteig´s 1990 and 91 publications was assigned to Periods 1–4.

Having done this, an overview was made over plan drawings represented in the material from selection 1, 2 and 3 and a fourth extraction was made, selecting Lnrs which were associated with plans where structures from Periods 1–4 could be represented. This left me with a large number of Lnrs from H-post or a really large number of contexts which had to be checked against the original diaries, catalogues, drawings and the 1990/91 publication of the stratigraphy and dating of the site. For the Lnrs that were relevant for Period 1 and 2, the whole site was checked; for the Lnrs that were relevant for Periods 3 and 4, only the one half of the site that has not been updated was checked.

The main thing was to assign the Lnrs to their correct period according to Herteig´s publications from 1990 and 1991. This was done by the following procedures:

The extracted Lnrs were ordered by the excavation grid system. (1) The Lnrs from a square were checked against the original paper version of H-post against the computer version[12], in order to see if one or more Lnrs had already been updated, for instance in association with the finds studied by specialists.

(2) After this I checked if the relationship between building-association (and thereby the period-association) and fire layer association in the database was in correspondence with Herteig 1990/91.

(3) If the relationship was *not* in correspondence, which was the case for about half the squares, the data was checked against the original diaries and drawings of plans and to a certain extent profile drawings. In a report from 1991 on the status of the H-post data, Herteig had set up certain 'conventions' for how the fire layers from the different excavation squares had been interpreted towards the 1990/91 publications (Herteig 1991b). But as he pointed out in the 1991 report, these conventions cannot be relied on and a manual investigation of the available data is required if the information on location in time and space is to be trusted.

After these procedures I ended up with c 6358 relevant Lnrs from H-post. In order to check the value of the context, I checked the contents of ceramic finds in the 'bags'

represented by the 6358 Lnr, through the C-post and the Ceramics databases. In the cases where the bags contained obviously younger material such as late medieval stoneware, Weser-, Werra- and modern ceramics, porcelain and clay pipes I checked the original documentation again. (Very often there would be a 'warning' on the original forms and the finds were described as material which had possibly fallen from the profile-edges, however in the computer version such warnings are not easily recognised.) This material, along with the rest of the contents of the 'bag' was weeded out. Having done this there were 6257 Lnrs left. These Lnrs should be fairly safely assigned to Periods 1–4. Some Lnrs may be missing though. No ceramics seem to have been found at all in certain squares; for the majority of these squares, however, no structures have been defined into the periods in the 1990/91 publications. So the lack of material in these squares are probably not due to lacunas in my method. The north-western area around the church of St Lavrans and Maria gildeskåle in the squares R 01, R 02, R 03 hardly has any finds. This can be explained by the fact that the original documentation from this area was so difficult to judge that I felt it to be safer to exclude most of the Lnrs from this area. All in all, even if some Lnrs are missing the material is so large that it should be representative for the periods on the whole.

Analysis of the ceramic material from periods 1–4

Having extracted the assembly of 6257 Lnrs or 'bags' of finds from H-post in the Bryggen databases, an analysis of the vertical distribution of the main groups of ceramic types and wares in Periods 1–4 will now be done.

Typology, quantification

In the early 1980s the ceramics from the Bryggen excavations were sorted into 61 groups by visual identification. The criteria for the classification were characteristics such as 'hardness', 'temper', 'wheel thrown' or 'glaze', or criteria such as 'colour', or, rarely, 'decoration'. Ian Reed and Rory Dunlop carried out the classification. The wares were given traditional names mostly referring to archaeological sites such as Pingsdorf and Scarborough. The names correspond largely with the *Rahmenterminologie* developed by German archaeologists for medieval ceramics (Lüdtke 1989,17).

Some of the ceramic types from the Bryggen site, such as the Pingsdorf Ware, the London Ware and the French material have been analysed by specialists (Lüdtke 1989, Blackmore and Vince 1994, Deroeux et al. 1994). The main typologisation carried out through two of these studies has been integrated in the original Ceramics database for the Bryggen material.[13] For the rest of the wares Dunlop and Reed's typology are still the main source of information on types. Reed and Dunlop did not classify the material into subgroups like e g Scarborough I and Scarborough II

Wares. This causes some problems when discussing the chronology, as different ware-types have different production dates. For Periods 2 and 3, I have gone through the Scarborough and Grimston Wares in order to refine the typology.[14] Otherwise I have basically used the typology in the Ceramics database, with only a few additions. In quantifying the sherds I have recorded the number of sherds mentioned in the Ceramics database.[15] I have not tried to figure out the number of vessels.

Dating through ceramic material

In general, ceramic material provides a wider dating frame than for instance dendrochronological material. The existence and coexistence of different ceramic wares provides a *post quem* date of how long *activity* must have gone on in a 'period'. In some cases, ceramic wares can also give us an estimated *ante quem* date for a period if there is a lack of very common wares in the period. In this study the ceramic assemblage comes from all types of layers; fire layers, in situ layers and redeposit layers from fill masses which were dumped along the water-front during the periods and after the fires which devastated the site. Due to the great amount of re-deposited material, especially in Periods 3 and 4, the *presence* of the different types of wares, rather than the *quantitative relation* between the wares or the *lack* of wares, will be used in the attempt to date the periods and fire layers. It is common to use the disappearance of wares as an indicator of age. This method, however, cannot be used for this group of ceramics. Due to the residual character of the material from the site, wares like for instance Paffrath and Pingsdorf Wares which usually disappear around the middle of the 13th century, are common at the Bryggen site, even into the 14th century (Lüdtke 1989, Diagram 9). It is, therefore, safer to use the presence of wares as a dating factor; this may provide a *post quem* date for how long *activity* must have gone on in a period.

Ceramic wares usually have an estimated start and end of production dates. The start and end of production dates are rarely *actually* documented through e.g. kiln finds or literary sources, but are more often established through finds of (or the lack of) sherds in well-dated contexts. Table 5 shows the approximate dates of the relevant ceramic wares found in Periods 1–4. Table 6 shows the vertical distribution of the ceramic sherds in Periods 1–4.

I now wish to compare the vertical distribution of the sherds with the approximate date of the ceramic wares.

The ceramic material from Period 1

In Period 1 Andenne, Pingsdorf and Paffrath Wares are represented in the assemblage of 11 sherds. Andenne and Pingsdorf Wares have wide dating frames

Table 5. The approximate date of the ceramic wares found in Periods 1-4

WARE TYPE	APPROXIMATE	DATE	REFERENCES
Andenne Ware	1000s–1450s	From 11th to mid 15th century	Reed 1990, 38.
Beverley type 2B Ware	1190–1300	Late 12th/early 13th to late 13th century	Reed 1990, 30.
Brandsby - type Ware	1250–1350	Mid 13th to mid 14th century	Reed 1990, 30.
Dev Stamford Ware	1150–1250	2nd half of 12th /after 1144 until mid 13th century	Reed 1990, 28.
Grimston Decorated Ware	1225–1350	From c 1125 to mid 14th century	Jennings & Rogerson 1994.
Grimston Soft Ware	1190s–1250	Late 12th and early 13th centuries	Clarke & Carter 1977, 186.
Grimston Ware	1190–1350	From late 12th to mid 14th century	Reed 1990, 31.
Ham Green Ware	1200–1300	13th to 14th century	Reed pers. com. August 98.
Hedon Ware	1190–1250	Late 12th to mid 13th century	Reed pers. com. August 98.
London Coarse Ware	1150–1200	Peak mid 12th century to c 1200	Vince & Blackmore 1994, 33, 61.
London Shelly Sandy Ware	1150–1220	Peak mid 12th century to c 1220	Vince & Blackmore 1994, 33.
London type Fine Ware, early style	1150s–1210	Peak mid 12th century to c 1210	Lüdtke 1989, 32.
London type Fine Ware, North French style	1185/1210–	From c 1185/1210(first deposited in London wharf)	Vince 1991, 263–271.
London type Fine Ware, Rouen Style	1185/1210–	From c1185/1210 (first deposited in London wharf)	Vince 1991, 263–271.
Lyvden Ware	1200–1300	Early 13th century to c 1300.	Reed 1990, 32.
Midland Shelly Ware	1150–1220	Perhaps a bit older than London Shelly	Reed pers. com. August 98.
Miniaturer	1100s–	Before 1138 in Alt Lübeck	Madsen 1988, 193.
Near Stonewares	1170s ?–	From the last decades of 12th century	Madsen 1988, 195.
North French Monochrome Green Glazed	1170s ?–1200t	From the last decades of 12th century ?	Madsen 1996, 22.
Paffrath Ware	1100s–1250s	From 11th to mid 13th century	Lüdtke 1989, 32.
Pingsdorf Ware	900s–1250s	From 8th to mid 13th century	Lüdtke 1989, 32.
Rouen Ware	1170s ?–	Last decades of 12th century	Madsen 1985, 60.
Scarborough I Ware	1135s–1225		Farmer & Farmer 1982, 100.
Scarborough II Ware	1215/1225–1350s		Farmer & Farmer 1982, 100.
Scottish White Gritty Ware	1150/1175–1300	2nd or 3rd quarter of 12th to early 14th century	Reed 1990, 31.
Shelly Ware	1100s–1250s	From 12th to mid 13th century	Lüdtke 1989, 32.
South Scandinavian and Danish Red Wares	1180–1350	Found in phase dated to 1180–c 1225	Madsen 1988, 193.
Splashed Ware	1000–1250	Early 11th to mid 13th century	Reed 1990, 29.
Tile and brick	1150–	Mid 12th century in Denmark	Liebgott 1989, 192.
York Glazed Ware	1180s	Deposited before 1188 in Beverly	Armstrong *et al* 1991.
Yorkshire Ware	1190s–1250	End of 12th to mid 13th century	Reed 1990, 30.

Table 6 The vertical distribution of the ceramic sherds found in Periods 1–4.

WARES	Period 1	Period 2	Period 3	Period 4	Period 1	Period 2	Period 3	Period 4
Andenne	2	300	677	636	18,18	28,12	16,74	8,36
Paffrath	4	537	1308	2094	36,36	50,33	32,35	27,52
Pingsdorf	5	119	823	1436	45,45	11,15	20,36	18,87
Miniatures	0	0	33	53	0	0	0,82	0,70
Scarborough I[1]	0	1	0	–	0	0,09	0	–
Misc Shelly[2]	0	32	425	813	0	3,00	10,51	10,69
London Coarse	0	10	64	89	0	0,94	1,58	1,17
London type Fine Ware Early Style[3]	0	7	210	729	0	0,66	5,19	9,58
Developed Stamford	0	29	258	520	0	2,72	6,38	6,83
Scotch White Gritty	0	0	29	22	0	0	0,72	0,29
French type[4]	0	2	15	60	0	0,19	0,37	0,79
York[5]	0	0	35	195	0	0	0,87	2,56
Beverly	0	0	0	1	0	0	0	0,01
Grimston Soft	0	0	16	–	0	0	0,40	–
Grimston Ware	0	1	25	–	0	0,09	0,62	–
Grimston Decorated	0	0	1	–	0	0	0,02	–
Grimston undefined[6]	0	0	3	284	0	0	0,07	3,73
Lond Fine Rouen/French type[7]	0	0	4	4	0	0	0,10	0,05
Lyvden [8]	0	0	4	26	0	0	0,10	0,34
Near Stoneware[9]	0	1	6	57	0	0,09	0,15	0,75
South Scandinavian	0	0	7	116	0	0	0,17	1,52
Scarborough II[10]	0	–	2	–	0	–	0,05	–
Scarborough undefined	0	1	0	142	0	0,09	0	1,87
Brandsby	0	0	0	12	0	0	0	0,16
Black ware, low fired[11]	0	15	21	51	0	1,41	0,52	0,67
Misc Glazed[12]	0	1	53	240	0	0,09	1,31	3,15
Tiles and Bricks	0	11	9	24	0	1,03	0,22	0,32
Saintonge	0	0	0	2	0	0	0,10	0,03
Mediterranean	0	0	0	2	0	0	0	0,03
Total number/%	11	1067	4043	7608	100,00	100,00	100,00	100,00

1 Scarborough types I and II were not separated during the initial typologisation, Rory Dunlop helped me go through the Scarborough material from Period 2 and 3 to separate the types.
2 This category contains the following types from the initial typologisation. The numbers in brackets refer to ceramic number in the Bryggen system: Div. Shelly Wares (077), East-Midland Shelly (072) and London Shelly Ware (006).
3 Terminology according to Vince & Blackmore (1995), in the Ceramics database this type is called London Brown (007).
4 See explanation in note 2: Fransk Type (French Type) (063) and Nord Fransk (North French) (080).
5 See explanation in note 2: York Grey Ware (003), York White Ware (008) and Hedon (066).
6 The different types of Grimston ware were not separated during the initial typologisation. Some sherds from Period 3 could belong to either the Grimston Decorated Type or the Grimston Ware Type. Sherds from Period 4 were not divided into types.
7 The numbers are taken from Vince and Blackmore 1994.
8 See explanation in note 2: Lyvden (045) and Lyvden (Lyvden Coarse Type Ware) (074).
9 This category is called "Nesten Steintøj (Proto Stone Ware)" (032) in the Ceramics database. It contains both Proto Stoneware and Near Stoneware. (Types as defined by Stefan [Stephan, 1983 #112, 95]).
10 See note 1.
11 This category is called "svart gods" (040) in the Ceramics database.
12 See explanation in note 2: Diverse glasert (Misc Glazed wares) (079), Humber Ware (001), Ham Green (078), Splashed Ware and Ipswich Ware (068).

and they were produced and distributed on both sides of 1100. Their presence cannot give us a close date of Period 1. However, the presence of Paffrath, which is commonly found from the 12th century and onward, shows that the period must have lasted into the 12th century; this dates Fire VIII to after 1100.

The ceramic material from Period 2

In Period 2, Andenne, Paffrath and Pingsdorf still make up most of the ceramics found at the Bryggen site. However, several other wares are introduced. The presence of Scarborough I, miscellaneous Shelly Wares, London Coarse Wares, London type Fine Ware and Developed Stamford show that we definitely have activity beyond the 1150s. The presence of one Near Stoneware[16] and two French type sherds suggest that Fire VI, which terminated Period 2, occurred somewhat later after the introduction of these wares. The earliest dated finds of Near Stoneware and French type ware have been made in Ribe (Denmark), here the wares were deposited between 1180 and 1225 (Madsen 1985, 60). The dates for these wares are still not so well established that one can pinpoint the year when production and circulation started (cf. Madsen 1996). Still, the Ribe finds may indicate that Near Stoneware and French type wares were produced and were in circulation already in the last decades of the 12th century. As the number of sherds is small, let us discuss the contexts for the single sherds: The Near Stoneware sherd (Tnr 85205) was found in the stone-filled foundation substructure no 45, which has definitely been assigned to Period 2. The sherd was found on the same level as log layer 4 in the substructure. This is about half a metre below the surface of this type of substructure. This substructure type was filled with big stones, not with refuse. This means that the sherd must have ended up in the substructure during the time of use or when the first fill masses from the next period were scooped onto the harbour front. The sherd should thus date from the last part of Period 2 or the very beginning of Period 3. The first French type sherd (Tnr 63809) was found 0–5 cm under Fire layer VII in a passage south of building 35, which was built on top of this fire layer. The documentation of Fire layer VII is quite clear in this part of the site, so the context should be reasonably safe. The second French type sherd (Tnr 85310) was found in building 196 from Period 2, 0–5 cm under Fire layer VII and this context should also be fairly safe. In the light of this, the sherd should date from the last part of Period 2. All in all the three sherds seem to have come from fairly good contexts and they should thus indicate that Period 2 lasted in to the last decades of the 12th century. The presence of one sherd of Grimston Ware may indicate that the period lasted until the 1190s, but this also needs further discussion. The sherd (Tnr 74745) was of the Grimston Ware type, which may be dated from the late 12th century and it was quite worn on the edges. The latter indicates that

the sherd had been transported perhaps several times before it ended up in its final context. This context is, according to the original documentation, in the masses *under* building 41, thus it is supposed to come from Phase 2.1 (see above). Building 41 is, however, dated through dendro material to shortly after 1135. In other words, this sherd which is not supposed to have been produced until the end of the 12th century, must be wrongfully assigned to Period 2 and should not be considered. One sherd of Scarborough Ware (Tnr 80988) has also been assigned to Period 2. I have not been able to find this sherd in the magazines, so it cannot be further classified into subtypes. Scarborough I is dated to the 12th century, Scarborough II is supposed to have been produced from around 1215/25. If the Scarborough sherd is of the type II Ware, we have an indication that Period 2 lasted up until after 1215/1225, but nothing else supports this in the ceramic material. However, the sherd may well be of the 12th century ware. As a third possibility the Scarborough sherd may have been wrongfully assigned to Period 2. The sherd was found in masses 'about' a post 'about' building 130 in Period 2.0, as such the context is unclear and somewhat floating and the sherd may belong to Period 3 rather than to Period 2, but this is difficult to judge. Therefore, I think we should not place too much faith in the single Scarborough sherd found in Period 2, when it comes to dating.

To sum up, sherds of mid 12th century types show that activity was still going on in Period 2 at least into the 1150s. Three sherds of later 12th century types furthermore imply that activities lasted into the last decades of the century. The number of sherds represented by the late 12th century wares is not impressive, but they seem to have been assigned rightly to Period 2. So if the approximate dating of their introduction is correct, they imply that Period 2 lasted into the last decades of the 12th century.

The ceramic material from Period 3

In Period 3 Andenne, Paffrath and Pingsdorf still represent the largest groups of ceramics. The English wares produced from the middle of the 12th century also make up a significant share. If we look at the youngest types in the assemblage, there are several wares that are usually found either from the last decades of the 12th century or from the beginning of the 13th century. These are: French type Ware (15), York (35), Near Stoneware (6), London type Fine Rouen/French style Ware (4), South Scandinavian (7) and Grimston Soft Ware (16). Lyvden Ware (4) is dated from c 1200. The presence of these wares indicates that Period 3 lasted at least until the last decades of the 12th century. Twenty-nine glazed Grimston sherds were also found in Period 3. Twenty-five of the sherds were most likely of the

Grimston Ware type, produced from the end of the 12th century. These sherds correspond well with the other late 12th century sherds found in Period 3. Three sherds could be either of the Grimston Ware type, or the Grimston Decorated Ware type, as they were decorated with applied scales. This type of decoration appears to be common on both the Grimston Ware type and the Grimston Decorated type (Clarke and Carter 1977, figs 88–90). As the three sherds cannot be placed safely in either group, I think they should be left out of the further discussion. One Grimston sherd was definitely of the Grimston Decorated type. The presence of this sherd may suggest that Period 3 lasted beyond the first quarter of the 13th century. Furthermore, two sherds of Scarborough II Ware may support this suggestion. However, as the number of sherds is small, let us consider the context of the three sherds. The Grimston Decorated type sherd (Tnr 88746) was found in a foundation substructure from Phase 3.2 at the same level as log layer 4. It is unlikely that the sherd was deposited later than Period 3, for instance during construction of Period 4 structures. The sherd should therefore be quite safely assigned to Period 3. The two Scarborough II sherds (Tnrs 10969 and 22999) were both found in waste layers along the harbour front under Fire layer VI and as such they should also be quite safely assigned to Period 3. All in all the three sherds seem to come from safe contexts and if the traditional dating of their start of production is correct, they indicate that Period 3 must have lasted until the first quarter of the 13th century.

To sum up, the presence of late 12th century wares in the Period 3 ceramic assemblage show that Period 3 lasted at least until the end of the 12th century. However, three sherds from fairly safe contexts suggest that the period may have lasted until after the first quarter of the 13th century, providing that the traditional dates for these wares can be trusted.

The ceramic material from Period 4

In Period 4 Paffrath and Pingsdorf still represent the largest groups of ceramics, the amount of Andenne sherds is declining. However, as mentioned above the decline or presence of wares cannot be taken as dating evidence in this material, which is heavily afflicted by residuality. If we look at the youngest ceramic wares, we now have a fair share of late 12th and 13th century wares represented such as Lyvden, London fine Rouen/French type Ware, Grimston Wares and Scarborough Wares. The latter indicates that Period 4 lasted until after the first quarter of the 13th century. Twelve sherds of Brandsby Ware and two sherds of Saintonge Ware, usually found from about 1250 tell us that we are approaching the middle of the 13th century and that the fire that terminated Period 4 must have occurred after or around this time.

Summary of the dates provided by the ceramic material

The ceramic material cannot date the beginning of Period 1, the presence of Paffrath shows that the period must have lasted into the 12th century and this dates fire VIII to after 1100. Sherds of mid-12th century types show that activity was still going on in Period 2 at least into the 1150s. Three sherds of later 12th century types furthermore imply that activities lasted into the last decades of the century. If the approximate dating of their introduction is correct, they imply that Period 2 lasted into the last decades of the 12th century. The presence of late 12th century wares in the Period 3 ceramic material show that Period 3 lasted at least until the end of the 12th century. However, three sherds from fairly safe contexts suggest that the period may have lasted until after the first quarter of the 13th century. Providing that the traditional dates for these wares can be trusted, the end of Period 4 is dated to the middle of the 13th century by sherds of Brandsby and Saintonge Wares.

Discussion: The dendrochronological material versus the ceramic material

We will now discuss the dates provided by the dendrochronological material versus the dates provided by the ceramic material. The dates provided by the two sources seem to supplement each other quite well, although for the youngest periods there are discrepancies as well.

The oldest dendro samples from Period 1 at the Bryggen site come from reused material and show that there was building activity in the vicinity of the Bryggen site as early as about 1029. When did activities begin at the site? One dendro sample from Period 1 has been dated to 1069. Although this sample is not in a well-documented context, its presence still shows building activity at the Bryggen site at the latest from the last quarter of the 11th century. In fact this corresponds very well with King Olaf Kyrre´s (1066–93) foundation of the town, which according to written sources took place around 1070 (Helle 1982, 86 pp.). Period 1 lasted until after 1110 according to the dendro samples from building 45 in Phase 1.2. The period probably ended before the early 1120s according to the dendro samples from Period 2. This corresponds very well with the ceramic evidence from Period 1, which suggests that the period must have lasted into the 12th century. It is also in full agreement with the archaeological interpretation of building 45 as a building used during a very short time span (Herteig 1991a, 96).

In Period 2 the first major building activity began in the 1120s, according to the dendro material. The dendro dates show that the second generation of structures at

the site was built in some places already from the late 1130s. The youngest dendro samples from Period 2 are dated to 1149 and they show that activity went on in Period 2 at least into the early 1150s. But when did Period 2 end and Period 3 begin? The dendro material from Period 3 provides two dating suggestions for Fire VII, which put Period 2 to an end and marked the beginning of Period 3. (1) Excluding the possibility of reuse for the youngest sample from Phase 3.1 and presuming that the youngest samples from Phase 3.2 were reused only once, the dendro samples indicate that Period 2 lasted until the late 1160s or the early 1170s, and that structures in Period 3 were under construction shortly after 1174. (2) If the samples from Period 3 all come from reused timber, and the samples from 3.2 were reused more than once, the samples from Period 3 imply that Period 2 lasted beyond 1174. This gives the beginning of Period 3 a wide post quem date of later than 1174 and dates Fire VII widely until after 1174. The ceramic material does not make it easy to choose between the two alternative dating suggestions proposed by the dendro samples. In Period 2, sherds of mid-12th century wares support the theory that the period lasted at least into the 1150s. However, three stratigraphically well defined sherds of Near Stoneware and French type Wares furthermore suggest that the end of Period 2 should be found towards the last decades of the century. Unfortunately, these ware types are only approximately dated within the last decades of the 12th century, and the dates are still not so well established that one can pin down the decade/year when production and circulation started. Therefore, it is not totally unlikely that the sherds could have been deposited on either side of the 1170s. The ceramic evidence may thus support both alternatives implied by the dendro material. As a consequence of this, we must leave the last word to the dendro samples from Period 3. Here I have more faith in the first dating suggestion due to the patterns discerned in the material. Therefore, I suggest that Fire VII, which terminated Period 2 and marked the beginning of Period 3, should be dated to the late 1160s or the early 1170s, according to the archaeological evidence. This leads us to the question of how long Period 3 lasted and when Period 4 began.

The dendro material from Period 4 is vitiated by the same methodological problems as the samples from Period 3. Therefore the samples provide two alternative dating suggestions for how long building activity went on in Period 3 (or more specifically in Phase 3.2) and for the beginning of Period 4. (1) If the youngest samples from Period 4 were only reused once, the samples from Phase 4.1 would date the beginning of the preceding Phase 3.2 to the late 1180s. The samples from Phase 4.2 would date the beginning of Period 4 to the late 1190s or early 1200s. (2) If the samples from Period 4 were reused more than once, they can not date activities in Period 3 or the beginning of Period 4. In this case they can only

provide a wide post quem date for Fire V, which terminated Period 4, to 'after 1200'. Due to the patterns in the material I would favour alternative 1 rather than alternative 2. We will see how the dates from the ceramic material correspond with the suggested alternatives. The presence of late 12th century ceramics shows that Period 3 lasted at least until the end of the 12th century. This corresponds well with both alternatives suggested by the dendro samples. However, we also have one sherd of Grimston decorated ware and two Scarborough II sherds in the Period 3 ceramic assemblage. These sherds stem from wares that are traditionally dated to after 1215/1225, and their presence suggests that Period 3 lasted beyond the first quarter of the 13th century. This is in opposition to Alternative 1 and in correspondence with alternative 2, because although the dendro samples from Period 4 do not exactly confirm that Period 3 lasted beyond c 1225, they do not contradict this either. The three sherds come from well-documented contexts and it is hard to explain their presence in the Period 3 material. They may of course have fallen from a profile and into the context – these things happen – but nothing else in 'their bag' seemed to be out of place, so nothing points in this direction. Three sherds out of a total of 4043 sherds in Period 3 are hardly anything to write history on. Nevertheless, a qualitative approach to the material has shown that these sherds can hardly be explained away.

It all comes down to a stand between the two alternative dating suggestions initially suggested on the basis of the dendro samples from Period 4: Alternative 1, which is supported by trends in the dendro material from Period 3, and alternative 2, which is supported by three well-documented sherds of 13th century wares. Which alternative is based on the most valuable dating evidence? Alternative 1 is based upon the premise that the youngest samples from Period 4 were reused only once. This is not unrealistic, but as we have seen, it is also possible that the samples came from timber that was reused several times. Alternative 1 corresponds very well with the pattern that formed the main basis for the suggested date for the end of Period 2/the beginning of Period 3. However, this is an argument based upon assumptions on several levels and I do not feel comfortable giving it too much weight. The three 13th century sherds are from well-documented contexts, but as they really are few, I do not feel comfortable putting stress on these sherds either. The dendro material is too weak to re-date the ceramic wares and the number of sherds is too small to provide firm dating evidence for the end of Period 3/beginning of Period 4. At this stage of research, I do not think it is possible to give Fire VI a well-founded absolute date on the basis of the available dendro and ceramic material alone. Consequently, I uphold two alternatives for the absolute date of Fire VI, which ended Period 3 and marked the beginning of Period 4. Alternative 1 is this: Fire VI occurred at the end of the 12th century or at the beginning of the 13th century.

This is supported by patterns in the dendro material, but contradicted by three sherds of Grimston decorated Ware and Scarborough II Ware, which today is dated from c 1215/1225. Alternative 2 is this: Fire VI must have occurred after the first quarter of the 13th century. Three well-stratified 13th century sherds indicate this. It is not contradicted by the dendro evidence, but the date is not exactly confirmed either.

When did Period 4 end? The youngest dendro sample in Period 4 shows that the period must have ended after 1201. However, this must be considered as a wide post quem date. The ceramic material shows that the period must have lasted at least until the middle of the 13th century. As is the case for the date for the end of Period 3 according to alternative 2, we can say that the dendro material does not contradict the ceramic date, but it does not exactly confirm it either. Still, if the mid-13th century sherds are in their correct stratigraphical position, and the approximate dates for the ceramic wares are correct, the material shows that Fire V, which terminated Period 4, cannot have occurred until the middle of the 13th century.

To sum up, the dendrochronological and ceramic materials suggest the following approximate dates for activity in the vicinity of the Bryggen site and Periods 1–4 at the Bryggen site. Activity in the vicinity of the Bryggen site may have taken place as early as around 1029. At the Bryggen site activity is documented in Period 1 at the latest from the last quarter of the 11th century. Building 45 from Period 1 was destroyed in Fire VIII about 1120, other buildings from Period 1 may have escaped the fire and lived on into Period 2. The main activity in Period 2 started in the 1120s and the period lasted until the late 1160s or early 1170s, where the built-up area was devastated by Fire VII. Building activities in Period 3 started accordingly after Fire VII and construction was most likely in progress about 1174. Fire VI, which terminated Period 3 and marked the beginning of Period 4, is not well established through the dendro and ceramics material alone. Two alternative dates are suggested: (1) Fire VI can be dated to the end of the 12th/the beginning of the 13th century. (2): Fire VI must have occurred after the first quarter of the 13th century. Period 4 started accordingly. The ceramic material shows that Period 4 ended around the middle of the 13th century.

Now the last ingredient in the dating-recipe will be added.

The 'historically' known fires and the archaeological fires

Can any of the periods and fires be associated with fires known from the written sources? A survey of the historically known fires which may have devastated the

Bryggen site was given by Herteig in 1985 (Herteig 1985, 21), the survey was based upon Knut Helle´s unpublished study of the documentary sources (Helle 1979), extended in this volume of the Bryggen Papers. The relevant fires for the periods up until the end of the 13th century were the fires in 1170/71, 1198 and in 1248. Is it possible to associate Periods 1– 4 and Fire layers VIII–V with any of these fires?

Fire VIII, which terminated building 45 in Period 1, probably took place around 1120. There are no documented fires from the written sources this early. Fire VII, which terminated Period 2, took place in the late 1160s or early 1170s and activity was possibly in progress around 1174 in Period 3. The documented fire in 1170/71 corresponds well with the archaeological dates; thus Fire VII may correspond with the documented fire in 1170/71. The archaeological dating of Fire layer V, which destroyed Period 4, to around the middle of the 13th century corresponds well with the documented fire of 1248.

But what about Fire VI? The fire has been assigned two alternative dates by the dendro and ceramic material. It is interesting to see that if Fire VI is dated according to alternative 1 – where the fire must have occurred at the end of the 12th century or at the beginning of the 13th century – this would correspond very well with the historically documented fire in 1198. Whereas if Fire VI is dated according to alternative 2 – where the fire must have occurred after the first quarter of the 13th century – Fire VI would represent a fire not documented in the written sources, and the 1198 fire would not have left any archaeological traces in the Bryggen material.

According to Sverris saga, the Bryggen site area certainly was destroyed in the 1198 fire (Sverris Saga in Helle this volume). The fact that fire layers dated to 1198 have been found on archaeological sites surrounding the Bryggen site on the three landward sides (Dunlop this volume) makes it almost unlikely that this fire should not have struck the area of the Bryggen site. These two facts support alternative 1 above alternative 2. On the other hand, if Fire VI is dated according to alternative 2, there are parallels in the Bergen material. Rory Dunlop (this volume) argues that a fire layer can be recognised in the archaeological material from several sites in the vicinity of the Bryggen site. He dates the fire layer to c 1230 on the evidence of Scarborough II and Grimston Wares in the phase terminated by this fire. Fire layer VI in the Bryggen material would according to alternative 2 correspond well with a similar date, due to the presence of Grimston and Scarborough II Wares in Period 3.

This means that both alternatives would match fires known from archaeological and written sources. Alternative 1 for Fire VI, however, is supported by *two* different categories of sources: the archaeological material from sites surrounding the Bryggen site and written sources, whereas alternative 2 is supported only by *one* category

of sources: the archaeologically documented fire dated to c 1230. Adding this argument to the arguments formerly presented pro and con the two alternative dates for Fire VI, I think that there is more evidence in favour of alternative 1 than in favour of alternative 2. Therefore, I think that Fire VI should be dated to 1198. This of course brings back the dilemma of the three well stratified Grimston and Scarborough II sherds found in Period 3. The three sherds may either have fallen from a profile and into the finds-bag, or the dates for their introduction must be revised.

To sum up (table 7), it seems that Fire V may be associated with the documented fire in 1248, Fire VI with the documented fire in 1198 and Fire VII with the documented fire in 1170/71. Fire VIII should be dated to c 1120 and cannot be associated with fires known from the written sources.

Table 7. The dates provided by the dendrochronological, ceramic and written sources.

PERIODE/FIRE	DATE
FIRE V	1248
Beginning of PERIOD 4	Early 1200s
FIRE VI	1198
Beginning of PERIOD 3	1170s
FIRE VII	1170/71
Beginning of PERIOD 2	1120s
FIRE VIII	C 1120
Beginning of PERIOD 1	After 1069
ACTIVITY in the vicinity of the Bryggen site, before Period 1	C 1029

Concluding remarks

Having followed 'the ideal recipe' for dating an archaeological site, we now have a new suggestion for the absolute chronology for Periods 1–4 at the Bryggen site. How does the suggestion correspond with previous dates for the Bryggen material? The new dates for the oldest periods are especially interesting because previous chronologies have not provided a closer date of the beginning of activities at the Bryggen site. Period 1 and also the beginning of Period 2/Fire VIII were until now only dated in wide terms to 'c 1150 or earlier' (Herteig 1985, 1990, 1991). The end of Period 2/Fire VII and Period 3/Fire VI has formerly been dated to 1170/71 and 1198 by Herteig (1985, 1990, 1991) and to 1198 and c 1230 by myself in my previous study of the Bryggen chronology (Hansen, 1994). As a result of this investigation, I conclude that the end of Period 2/FireVII should be dated to 1170/

71 and that the end of Period 3/Fire VI should be dated to 1198. The date for the end of Period 4/Fire V to 1248 corresponds well with suggestions proposed by Herteig (1985, 1990, 1991) and Lüdtke (1989).

The dates provided by the ceramic material are crucial for the absolute chronology of the Bryggen material. In this study we have seen that they are especially important for the absolute date of Period 3. The study of ceramics is still in its teens and refinement of the dating evidence is still being carried out, we must therefore expect that changes in the dates for ceramic wares may appear in the years to come. This may have consequences for the understanding of the material from the Bryggen site. To the best of my knowledge, however, the results above are based on the information presently available.

Bibliography

Armstrong, P., D. Tomlinson & D. H. Evans, 1991 Excavations at Lurk Lane, Beverly 1979–82, *Sheffield Excavation Reports,* 1.

Blackmore, L. & A. Vince, 1994 Medieval pottery from south-east England found in the Bryggen excavations 1955–68, In *The Bryggen Papers. Supplementary Series*, edited by A. E. Herteig, pp. 9-161, vol. 5. Scandinavian University press, Bergen.

Christensson, E. A. S., 1988 *Brande og kronologi i Bergen – belyst ved tre mindre udgravningsfelter,* Magistergradsavhandling, Universitetet i Bergen.

Clarke, H. & A. Carter, 1977 *Excavations in Kings Lynn 1963–1970*. The Society for Medieval Archaeology Monograph Series 7, London.

Deroeux, D., D. Dufournier & A. E. Herteig, 1994 French medieval ceramics from the Bryggen excavations i Bergen, Norway, In *Bryggen Papers, Supplementary series*, edited by A. E. Herteig, pp. 161–208, vol. 5. Scandinavian University Press, Bergen.

Dunlop, A. R., K. L. Hjelle, J. Komber & J. V. Sigurðsson, 1994 *BRM 245 Domkirkegaten 6*, Riksantikvaren Utgravningskontoret for Bergen.

Farmer, P. G. & N. C. Farmer, 1982 The dating of the Scarborough Ware Pottery industry, *Medieval Ceramics. Bulletin of the Medieval Pottery Research Group,* 6:66–88.

Hansen, G., 1994 *Den overordnede bebyggelsestopografi omkring 1190 i Bergen.* Riksantikvaren Utgravningskontoret for Bergen, Bergen.

Hansen, G & E. Reimers, in prep Dendroprosjektet 1997/98. Resultater og metode.

Helle, K., 1982 *Bergen bys historie. Kongssete og Kjøpstad. Fra opphavet til 1536*. Bergen bys historie Bd 1, Universitetsforlaget, Bergen.

Helle, K., this volume, Medieval fires in Bergen according to written sources, In *Bryggen Papers, Supplementary Series*, vol. 6.

Herteig, A. E., 1985 The archaeological excavations at Bryggen, 'The German Wharf', in Bergen, 1955–68, In *Bryggen Papers. Main series*, pp. 9–49, vol. 1., Universitetsforlaget, Bergen.

Herteig, A. E., 1990 The buildings at Bryggen, their topographical and chronological development, In *The Bryggen Papers. Main series*. Translated by Long, Clifford D, vol. 3, part 1. Norwegian University Press, Bergen.

Herteig, A. E., 1991a The buildings at Bryggen their topographical and chronological development, In *The Bryggen Papers. Main Series*. Translated by Long, Clifford D, vol. 3, part 2 + plates. Norwegian University Press, Bergen.

Herteig, A. E., 1991b *Rapport vedr. ajourføring/oppdatering av feltkronologien*, Middelaldersamlingen, Arkeologisk Institutt, Universitetet i Bergen. Submitted to Intern rapport, Middelaldersamlingen, Arkeologisk institutt, Universitetet i Bergen.

Jennings, S. & A. Rogerson, 1994 The distribution of Grimston Ware in East Anglia and beyond, In *The Late Saxon and Medieval Pottery Industry of Grimston, Norfolk: Excavations 1962–92*, edited by M. Leah, pp. 116–120. *East Anglian Archaeology Report*, vol. 64. Norfolk Field Archaeology Division, Norfolk.

Liebgott, N. K., 1989 *Dansk middelalderarkæologi*. G.E.C Gad, København.

Lüdtke, H., 1989 The Bryggen pottery I. Introduction and Pingsdorf Ware, In *The Bryggen Papers. Supplementary Series*, vol. 4. Norwegian University Press, Bergen.

Madsen, P. K., 1985 The Earliest Dated Finds of Glazed Pottery in Ribe, *Medieval Ceramics, Bulletin of the Medieval Pottery Research Group,* 9:57–63.

Madsen, P. K., 1988 On the Dating of Medieval Pottery – in the Light of Recent Finds from Ribe, *Journal of Danish Archaeology,* 6, 1987:190–197.

Madsen, P. K., 1996 Bleiglasierte Hochmittelalterliche Irdenware in Nordeuropa, In *Töpferei- und Keramikforschung*, edited by H. Lüdtke and R. Vossen, pp. 15–29, vol. 3. Habelt GMBH, Bonn.

Reed, I., 1990 *1000 years of pottery. An analysis of pottery, trade and use. Meddelelser* 25. Riksantikvaren, Trondheim.

Thun, T. & S. Gulliksen, 1990 Dating of a floating tree-ring chronology from Bryggen in Bergen, In *The Bryggen Papers. Main Series*, pp. 145–151, vol. 3, part 1. Norwegian University Press, Bergen.

Thun, T. & U. Hafsten, 1990 A medieval tree-ring chronology of 433 years, based upon pine-log material excavated in Bergen, In *The Bryggen Papers, Main Series*, pp. 135–144. Translated by Long, Clifford, vol. 3, part 1. Norwegian University Press, Bergen.

Vince, A., 1991 Early medieval London: refining the chronology, *The London Archaeologist,* 6(10):263–271.

Notes

1 See for instance Diaries from the 1974 season by Kalle Sognnes

2 The preliminary results which Herteig refers to in 1985 (Herteig, 1985 32) must be the results Terje Thun published in 1984 (Thun 1984). Thun presented 42 dendro samples from the Bryggen material. Tree-rings from the samples overlapped each other making up a floating tree-ring chronology. This chronology was as an experiment compared with the fire-layer chronology and there was a pattern which seemed to correspond well with the 'fire-layer chronology' (Thun 1984,100).

3 This study was my masters-dissertation ('speciale') in medieval archaeology from the University of Århus, DK (Hansen 1994). The aim of this study was to discuss the extent of the built-up area in the town of Bergen c 1190.

4 In addition to the arguments posed in 1994 (Hansen 1994) new information about runic inscription acc. no 42011 has come up. The inscription which was associated with King Sverre's eldest son, Sigurd Lavard, was found 20 cm under the floor of building 98 *(bygn 98*) and is assumed to be contemporary with the building. According to the 1985 publication building 98 belonged to building Phase 3.2 which burned in fire VI (ibid., 31), however, later the same building has been redefined into building Phase 4.2 which burned in fire V (Herteig 1991, plate 9). This means that it is no longer relevant to discuss this inscription in connection with the absolute date of fire VI.

5 This is a Dr. art. project under the Department of Archaeology at the University in Bergen.

6 This was done as a joint venture with my colleague, architect Egill Reimers in 1997/98; a joint venture in the sense that we have done all the registrations and sample work together because within our independent projects, we needed good dating material for a number of structures from medieval Bergen. For a thorough description of the project see Hansen and Reimers forthcoming.

7 In 1990, when the samples were published, the tree ring curve for western Norway was still not complete, therefore some of the older datings have been redated. Pers. comm. Terje Thun. Sample De 944, formerly dated to

1200 in the 1990 publication (Thun 1990, Table 2) is now dated to 1136, Dendro 1339 formerly dated to 1224, is now dated to 1162 and Dendro 1067 formerly dated to 1230 cannot now be dated.

8 The original documentation of the dendro samples was carried out during the excavations. The list was, until our project was carried out, not updated with information on construction no. or on which period or phase the sample comes from.

9 These databases are managed by Middelaldersamlingen, Department of Archaeology, University of Bergen, at Bryggens Museum.

10 One exception to this rule was performed at the end of the 1974 excavation where the 1-7 numbering system proved too chaotic and a letter system was introduced.

11 One exception to this rule is the corrections made in connection with James Knirk's studies of the runic material, his corrections are documented in H-post.

12 Acss. No. 1-44365: The A3 'feltprotokol', Acss. no 44366-78341 the 'A5 forms' and Acss no 78342-89999 the 'A4 forms'.

13 This applies to the Pingsdorf material studied by Lüdtke and the London wares studied by Vince and Blackmore.

14 My college Rory Dunlop has helped me out here. He has divided the Scarborough wares into type I and II. Grimston have been divided into Grimston soft wares, Grimston wares and Grimston Decorated wares according to Clarke and Carter 1977 (Clarke 1977, 186, 200, 206).

15 In a few cases the ceramics data base showed that a specific ceramics type was represented in a 'bag of finds' but the *number* of sherds of the particular type was not specified, in these cases I have counted these as *one* sherd.

16 See note on Near Stoneware in table 6. Sherd Tnr 85205 may belong to either the Proto Stoneware or the Near Stoneware types. If it belongs to the Proto Stoneware type it may be slightly older than if it belongs to the Near Stoneware type, as Proto Stoneware is the forerunner for Near Stoneware according to Stefan (Stephan 1983, 95).

A. Rory Dunlop

An archaeological survey of Bergen's medieval fires

Introduction

To the best of this writer's knowledge, no complete archaeological – as opposed to historical – survey of Bergen's medieval fires has yet been compiled, though there exist a number of partial treatments. Many readers will naturally be familiar with the firelayer chronology of the extensive Bryggen excavations (Herteig 1985, 32–33; Herteig 1990, 12), while probably relatively few will be acquainted with the reassessments of parts of the original chronology that have been put forward recently (Dunlop & Sigurðsson 1995; Hansen 1994). Christensson (1988) has dealt in detail with the firelayer sequences at three minor sites – Finnegården 6A (Dunlop 1982), Svensgården's *stallbygning* (Christensson *et al* 1982) and Øvregaten 39 (Dunlop 1981) – that were excavated in the early 1980s by the former Bergen excavation office. Partial firelayer sequences from these and several other sites have also been presented and discussed in a recent article that was co-authored by an archaeologist and an historian (Dunlop & Sigurðsson 1995).

This article therefore represents an attempt to collate the available archaeological information from sites – as opposed to ditch observations or other 'casual' sources – investigated by the Bergen excavation office since its inception in 1980, together with the appropriate information from major sites dug by other bodies prior to 1980 (fig. 1). As such, it is intended as a counterpart to Helle's article in this volume.

In the reports on each excavation undertaken by the Bergen excavation office, the recorded firelayers have been correlated – at least provisionally, and in the light of the information currently available – with the historical fires. To the best of my knowledge, no necessary or sufficient reason has arisen in the intervening years to require any revisions; in any case, this is neither the time nor place for carrying out an exhaustive reappraisal of the field-documentation. In other words, the excavation reports have been used as they stand, and should be consulted by readers thirsty for details. In addition, the reader's attention is directed to tables 2–9,[1] which present 'histories' of the principal sites, together with the salient dating evidence.

My intention is therefore to address the fires in chronological order, starting with the earliest, and list the sites at which the various fires have been identified; table 1 displays this information in condensed form (and, for the sake of completeness, also includes post-medieval fires). Problems or ambiguities connected with the dating evidence from the individual sites will be presented and, hopefully, clarified. This approach will convey two benefits: first, it will facilitate comparison with the historical survey; and secondly, it will facilitate comprehension of the individual fire's physical extent (again, to enable comparison). Fires that affected no more than single buildings or only *very* limited areas (1207, 1266, 1454, 1455, 1464 and 1528) will not be considered. Table 10, which presents the major medieval fires, the sites affected by these fires, and a relatively 'stripped' survey of the dating evidence, is intended as a kind of tabular summary.

Briefly, the objectives of this article can be outlined as follows:

- to make available an orderly survey of the firelayers at the various sites;
- to determine the degree of congruity between the archaeological material and the historical sources (including the question of 'local' fires);
- to assess the validity of the current approach to dating archaeological sites in Bergen;
- and, if possible, to draw conclusions as to the relative efficacy of fire prevention in medieval and post-medieval times.

But first of all – out of consideration for the non-archaeologists and the otherwise uninitiated – it will be necessary to make a short exposition of some fundamental post-excavation methods and concepts, as understood and applied by the Bergen excavation office.

Post-excavation methods & concepts

In working up an excavation report, almost invariably the first step is to establish the site's *relative* chronology, by means of stratigraphical analysis. At this stage, the relative chronology is completely divorced from calendrical notation; it merely represents the division of all the layers and constructions documented on the site into successive units called *phases*. A phase comprises those layers and constructions that are in stratigraphic association with each other, and that must have been deposited and/or used together for a certain period of time (Christensson 1988, 8–11, 60; Myrvoll 1992, 33–35; Nordeide 1988, 38–46). Having said that, the concept 'phase' can be defined more easily in terms of what it is *not* rather than by what it *is*, though this may seem somewhat of a paradox. It must therefore be emphasised that 'phase' definitely does not embody a predetermined duration; in other words,

it is not a unit of time like a month or a year. It does not have to fulfill prescribed spatial criteria; it need not cover the whole of, or even the major part of, the site-area. Nor is there any fixed numerical component: thus, it is quite possible – and methodologically permissible – for two adjacent sites to be divided into a dissimilar number of phases; and finally, a phase may comprise anything from a single layer/construction to a – theoretically at least – unlimited number of layers/constructions.

The phase itself consists, in principle, of three successive *stages*; like phases, stages are neither spatially nor temporally circumscribed. First comes the *construction* stage; this comprises the preparation, or *levelling*, of the area prior to its use, either by the removal of older deposits or by the deposition of new, together with the erection of the structures themselves. This is followed by the *occupation* stage, the nature of which is self-explanatory, and which is almost invariably the longest part of the phase; it is important to note that deposits laid down during this stage, together with any artefacts that these deposits may contain, virtually always derive from *contemporary* occupation – which is not necessarily the case as regards deposits associated with the construction stage. This in turn is followed by the *destruction/demolition* stage, marking the end of the phase. The most prominent type of destruction layer is the fire layer; the presence of a firelayer is always taken to denote the transition from one phase to the next. In the vast majority of cases, destruction/demolition-stage deposits represent contemporary and relatively short-lived events.

Once a site's stratigraphic sequence has been analysed and the phases defined, the actual process of dating – whereby the relative chronology is related to calendar years (the *absolute* chronology) – can begin. The phases represent a sequential *framework*, but the dating of the commencement and termination of each phase must be based on information provided by either datable artefacts (pottery, coins, combs, shoes, glass), or scientific methods (^{14}C-dating, thermoluminescence, dendrochronology), or historical sources, and preferably – if possible – a combination of all three. In practice, the excavations conducted by the Bergen excavation office were always dated first by means of the archaeological material, with any scientific dating results or historical information being used secondarily to provide independent confirmation, since the latter sources were customarily in short supply. This can be termed an 'archaeological-historical' approach, in contrast to the more historical method applied in connection with excavations prior to 1980.

At the same time, the archaeologist must also evaluate and allow for potential sources of error. With regard to datable artefacts, perhaps the single most significant source of error concerns the type of *context* from which the material derives. Finds from construction-stage deposits must be treated with circumspection, because the layers may well consist either entirely or partly of redeposited material, and

may therefore contain artefacts older than the phase of which they form a part – such artefacts are termed 'residual'. Sealed occupation layers and destruction layers, especially firelayers, generally provide the most reliable contexts.

Having collated the available dating material, and having verified its credibility, the archaeologist can now attempt to construct an absolute chronology for his site. This is where firelayers play a crucial part, since *most* firelayers derive from historical events of known date. The archaeologist therefore has to decide, using all the information at his disposal, how best to relate the archaeological sequence of firelayers to the historical sequence of fires – in other words, to arrive at a 'best fit' solution. In so doing, he must of course consider the possibility that the former may contain the remains of unrecorded fires.

The reader should also note two other matters of significance in dating medieval urban sites. First, successive phases are presumed to be contiguous – i.e., with little or no interval between the end of one phase and the start of the next – unless there is very good reason to the contrary. And secondly, as a corollary of the first, that phases are never looked at in isolation; the 'final' dating of any given phase is always evaluated in terms of the dating of the phases immediately before and after. Hopefully, this should preclude the introduction of serious chronological discrepancies.

Dating based on pottery types

The original dating of the sites under discussion was primarily based on pottery types. It is perhaps not unimportant to mention that the ceramic assemblages from all of these sites, including 90% or more of the pottery from Bryggen as well, was sorted (visually) by a single individual, the author of this article.

The principle behind dating by pottery types is relatively straightforward. If it is known that production of type A started in 1250, then the phase in which this type first occurs cannot have started before 1250 at the very earliest; the date 1250 therefore represents the *terminus post quem* of that particular phase. Since phases usually contain more than one pottery type, it is naturally the starting-date of production of the *youngest* type that provides the *terminus post quem*.

In practice, however, dating by pottery types is not unproblematic. For one thing, many of the types that regularly occur in Bergen still lack precise dates for the start of production. For another, even when the starting-date is known, there is also the *time-lag* factor to take into account, i.e., the interval between a particular type's production-start and its first occurrence in Bergen. And thirdly, there is the crucial factor of *context*. As previously mentioned, artefacts found in construction-stage deposits may well be 'residual', which is to say possibly a lot older than the

phase to which they stratigraphically belong. The opposite of residual is 'intrusive', which denotes a situation where younger artefacts have been introduced by some means – whether natural or cultural, or even just accidental (such as a piece of pottery falling from a profile and becoming embedded in a layer below) – into older deposits.

It goes almost without saying that one usually dates on the basis of *presence*, but it is also permissible, to a certain extent, to date on the basis of *absence*. This principle can be illustrated by the following example, taken from the excavation at Domkirkegaten 6 (Komber *et al* 1994). Occupation layers belonging to phase 5 yielded sherds of Weser-type pottery, production of which started c. 1570. This meant that phase 5 most likely started c. 1570–80. On the other hand, phase 5 deposits revealed a total absence of claypipes, which normally occur in Bergen from around 1600 and later, indicating that phase 5 must have ended by c. 1600–10. The presence of burnt constructions and patches of firelayer on the site showed that phase 5 must have ended in a fire, and reference to the history books quickly provided a likely candidate – the fire of 1623, which devastated the whole of the surrounding area. It was therefore possible to state, with reasonable confidence, that phase 5 must have lasted from c. 1570–80 to 1623, a dating supported by the fact that deposits of the succeeding phase, phase 4, produced finds of both Weser-type pottery *and* claypipes. Dating on the basis of absence has also been used at a number of other urban sites in Norway – e.g., Storgaten 24/26, *felt* A1, Tønsberg (Reed 1992, 82).

Medieval fires in Bergen

Ca. 1150

At the sites of Dreggsalmenning 14–16 (Golembnik 1994) and Kroken 3 (Dunlop 1987), traces were found of a firelayer that is stratigraphically older than the firelayer that has been correlated with the known fire of 1170/71. The archaeological dating evidence from these firelayers is very scanty, and the dating of the fire in question is therefore quite speculative. However, charcoal from the firelayer at Dreggsalmenning 14–16 has been ^{14}C-dated, at one standard deviation, to AD 1030–1190 (calibrated), while burnt stone from the same firelayer has been dated by thermoluminescence (TL) method to 1190±40, thus providing reasonable confirmation.

At the nearby site of Øvregaten 39 (Dunlop 1981) were recorded two firelayers stratigraphically older than the firelayer correlated with the known fire of 1198. These firelayers were never dated in the original report, due to the absence of datable material, but one may assume that they represent the fires of c. 1150 and

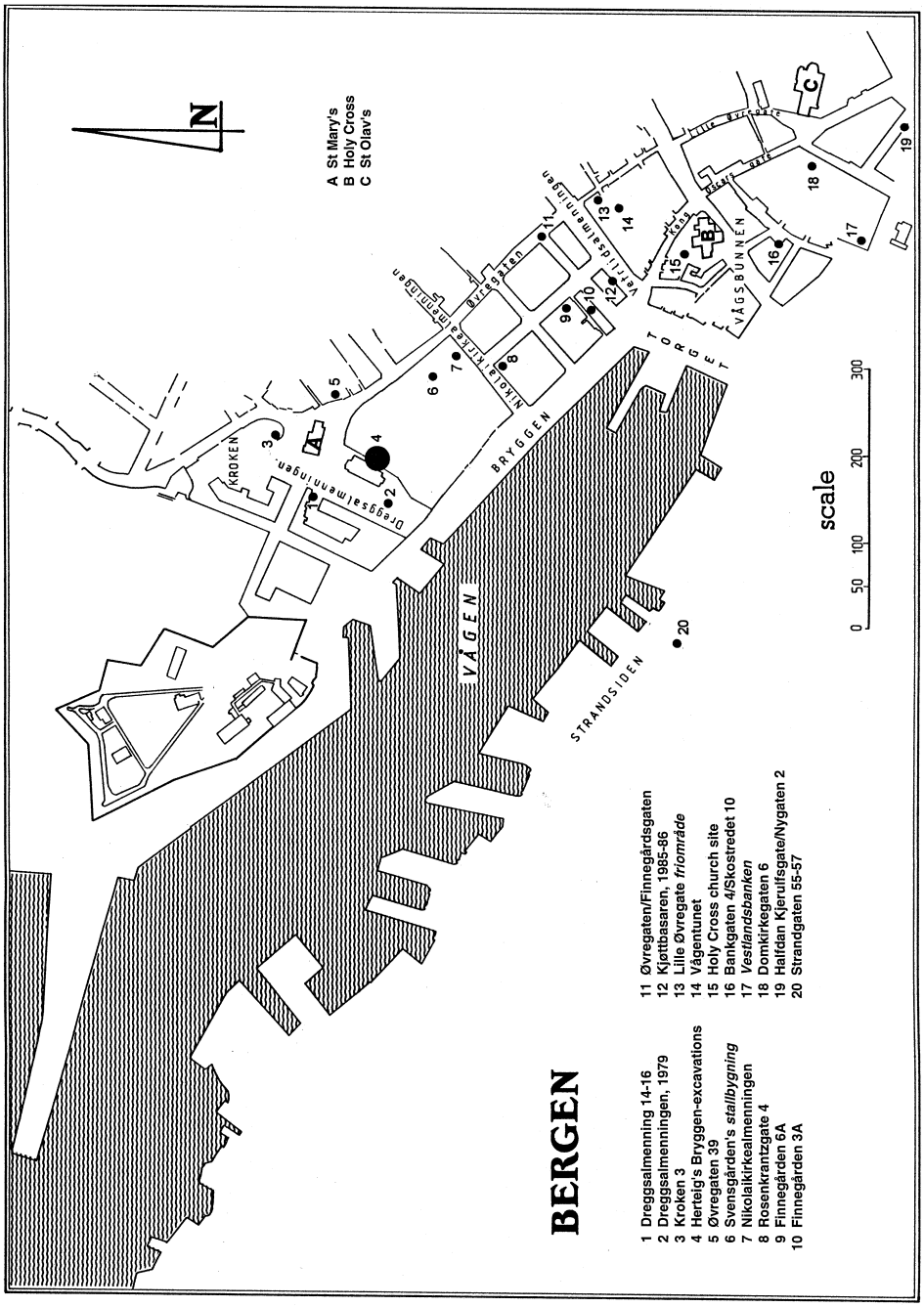


Fig. 1. Placenames and archaeological sites in Bergen.

1170/71. Twigs from a layer associated with the older of the two fires have been ^{14}C-dated, at one standard deviation, to AD 1005–1160 (calibrated).

Topographically, the fire seems to have been confined to the town's northern end, around St Mary's (Mariakirken) – which, at this time, was part rather of the core-area than of the periphery (as it later became). Might not this fire also have been responsible for destroying the original church (?) that occupied the site of the present St Mary's (Lidén & Magerøy 1980, 11)? One should recall that construction of the oldest part of the present building probably began sometime around 1150.

Regarding Herteig's Bryggen-excavations, if the firelayer chronology designated Alternative I is valid, then the northern part of Bryggen must also have been affected by a fire at around 1150. However, serious doubts concerning the validity of Alternative I have been raised in recent years (Dunlop & Sigurðsson 1995; Hansen 1994), and this article will proceed on the basis that Herteig's Alternative III – where the first firelayer corresponds to the historical fire of 1170/71 – is demonstrably more valid than Alternative I.

1170/71

Firelayers correlated with the fire of 1170/71 were found at the sites of Dreggsalmenning 14–16, Kroken 3, Øvregaten 39 and Finnegården 6A (Dunlop 1982). The archaeological dating material from the first three sites was meagre, whereas that from Finnegården 6A was relatively abundant. Charcoal from the firelayer at Dreggsalmenning 14–16 has been ^{14}C-dated, at one standard deviation, to AD 1170–1270 (calibrated). At Finnegården 6A, samples taken from posts associated with the two phases immediately preceding the firelayer were submitted for dendrochronological analysis, and have yielded felling dates of AD 1103, 1112 and 1118 –which certainly does not contradict the firelayer's correlation to the fire of 1170/71.

Topographically, the majority of sites lie in the town's northern area, which tallies well with what can be inferred about the extent of the fire from the written records. The fire has also been identified at Herteig's Bryggen-excavations, of course, but – as yet – at no site in the central part of the Bryggen area. This leaves Finnegården 6A strangely isolated in the south, and a totally convincing explanation for this is hard to find. Perhaps the fire 'jumped' the central part of Bryggen, which at this time seems to have been only sparsely built up?

1198

In the town's northern part, firelayers correlated with the fire of 1198 were found at Dreggsalmenning 14–16, Kroken 3 and Øvregaten 39, as well as at Herteig's Bryggen-excavations. In the central part of Bryggen, a corresponding firelayer

was found at the site of Svensgården's *stallbygning*. Regarding the site of Rosenkrantzgate 4 (Lindh 1979; and see also the section on the 1225/30 fire below), it is difficult to be sure since, unfortunately, the original report-work did not embrace a thorough examination of the dating material. To the south, firelayers correlated with the fire of 1198 were found at Finnegården 6A and in various profiles recorded along Vetrlidsalmenning (Dunlop in prep.).

In general, the archaeological dating material from these sites was relatively abundant, so that the dating of the firelayers should be quite reliable. This makes it rather surprising that TL-dating of material from the firelayers at Dreggsalmenning 14–16 and Kroken 3 should be so much at variance with the archaeological dating; the TL-dating results were, respectively, 1340±40 and 1280±50. However, a check of the original field-documentation at Kroken 3 has revealed that the sample was taken from a context too close to a stone foundation; it had therefore received an abnormally large dose of radiation, making it appear younger than it actually was.

As for Finnegården 6A, a sample from a post associated with the phase immediately preceding the firelayer has been submitted for dendrochronological analysis, and has yielded a felling date of AD 1113 – which, though somewhat early, certainly does not contradict the firelayer's correlation to the fire of 1198.

From the sites' distribution, it is clear that the 1198 fire must have claimed all of Bryggen, as far south as today's Vetrlidsalmenning, together with the area surrounding St Mary's. This tallies very well indeed with the information from Sverre's saga. Vetrlidsalmenning, for instance, lies only a short distance northwest of Holy Cross church (Korskirken), which, according to the saga, marked the fire's southern limit. A small excavation in 1984 (Dunlop 1985b), just to the north of Holy Cross church, failed to turn up any trace of a corresponding firelayer, but this can be explained as a result of the fact that the first layers on this site were almost certainly deposited later than c. 1200 (Hansen 1994, 64).

1225/30

The occurrence or non-occurrence of a fire at this time is one of the most contentious issues in contemporary discussions among archaeologists and historians concerning Bergen's medieval history. It would serve little purpose to reiterate the archaeological argument here, but it is perhaps worth repeating one of the concluding remarks in the latest paper on the subject: 'Therefore, in so far as the dating evidence remains unchanged, archaeologists may continue to assert the existence of the 1225–30 fire' (Dunlop & Sigurðsson 1995, 90). And thus far, it should be noted, the dating evidence – and the premises on which the dating is based – *have* remained unchanged.

Firelayers representing the putative fire were found at the following sites: Dreggsalmenning 14–16, Kroken 3 and Øvregaten 39 in the northern part of the town, together with – if one accepts Dunlop and Sigurðsson's arguments – Herteig's Bryggen-excavations; Svensgården's *stallbygning* in the central part of Bryggen; and Finnegården 6A and Finnegården 3A (Golembnik 1993) in the southern part of Bryggen. At the latter site, admittedly, the only evidence was in the shape of a single layer interpreted as redeposited charcoal derived from a fire – but there *was* a stratigraphic correlation with the 1225/30 firelayer at the neighbouring Finnegården 6A site.

During the original excavations at Rosenkrantzgate 4, indications were found of a fire that, according to Hansen's analysis (Hansen 1994, 173–175), must be older than the 1248 fire and younger than the 1198 fire. It is tempting to suggest that it must represent the 1225/30 fire, but no hard and fast conclusions can be drawn until the archaeological dating material has been subjected to a thorough and systematic examination. Subsequent excavations at this site (Ekroll 1981) did not reach down to the same level, and are therefore unable to shed further light on the matter.

While it is true that the original dating of the various firelayers rested on only a very few pottery types – or, more accurately, the current dates for the start of production of these types – it is also true to say that the archaeological evidence is relatively consistent. Results derived from scientific dating methods, however, introduce an element of conflict. On the one hand, at Finnegården 6A, pottery from the phase ended by the postulated 1225/30 fire has been TL-dated to AD 1230 (± not known); most of the sample sherds came from the firelayer itself. And a dendrochronological sample from the phase *succeeding* the phase ended by the 1225/30 fire yielded a felling-date of 1214, thus providing corroboration of the dating.

On the other hand, at Svensgården's *stallbygning*, two timbers from the phase *following* the phase ended by the supposed 1225/30 fire must have been felled in 1243 and 1247 respectively, according to dendrochronological analysis. At first sight, this ought not to present a problem. The difficulty with these datings lies in the fact that the phase succeeding the phase with the dated timbers ends with the fire of 1248! In other words, if one accepts these datings, two phases must have occurred within the space of a single year – which is stretching the imagination just a little too far for comfort.

The only explanation for the anomalous datings from Svensgården is that the timbers must have been assigned to the wrong phase. How this might have happened has something to do with the way in which the site was dug. When manual excavation stopped in the spring of 1981, an appreciable amount of the area

remained unexcavated. The following year, most of this remainder was removed by machine, but under archaeological supervision. It was in this latter part that the two timbers in question were documented and sampled. Conceivably, some error may have crept in, either in connection with the supervision process itself, or when the results of the manual and mechanical excavations were correlated. Identifying the source of error would now, unfortunately, be a most difficult and laborious task; this problem must therefore remain unsolved for the time being.

Regarding the extent of the fire, and stipulating the inclusion of Herteig's site, most of Bryggen must have been affected, together with the area surrounding St Mary's. Not too much should be made of the fact that the firelayer at Finnegården 6A was found only in the northern half of the site; the southern half was not occupied by buildings at this time.[2] However, it is virtually certain that the fire did not spread as far south as today's Vetrlidsalmenning.

1248

In the northern part of town, firelayers correlated with the fire of 1248 were found at Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Herteig's Bryggen-excavations, and at the 1979 Dreggsalmenning-excavations (Long & Marstrander 1980). In the central part of Bryggen, a corresponding firelayer was found at Svensgården's *stallbygning* and at Rosenkrantzgate 4; sporadic traces of redeposited firelayer material were also found at a very minor excavation just to the north of today's Nikolaikirkealmenning (Dunlop 1985a). To the south, firelayers correlated with the fire of 1248 were found at Finnegården 6A, Finnegården 3A, Øvregaten/Finnegårdsgaten (Christensson 1980), and in most of the profiles recorded during the Vetrlidsalmenning investigation. Sporadic traces of a firelayer provisionally dated to 1248 were found along the southern side of Kjøttbasaren, Vetrlidsalmenning 2 (Dunlop 1986).

To the south of Vetrlidsalmenning itself, as yet very few definite traces of the 1248 fire have been found. There is a possible candidate at the site of Lille Øvregate *friområde* (Hansen 1995), but in this case there is a conflict between the archaeological material, which supports a correlation with the 1248 fire, and a ^{14}C-dating, which indicates that the firelayer must be younger. However, charcoal from a firelayer exposed during a very minor investigation in the area known as Vågentunet (just a short distance to the south of Hansen's site) has been ^{14}C-dated, at one standard deviation, to BP 865±65, calibrated to AD 1050–1255 (Dunlop 1994). In view of the pottery types associated with the firelayer (Grimston and near-stoneware from the layers directly above, Grimston and Scarborough fabric type II from the layer beneath), it is virtually certain that it represents the fire of 1248.

More than any other medieval fire in Bergen, the 1248 fire has achieved cornerstone status in the process of correlating archaeological and historical events; once this fire is identified at any given site, correlation of the other firelayers becomes much easier. Part of the explanation is that, at almost every one of the above-mentioned sites, the associated pottery assemblage has been more than adequate for dating purposes. A second factor is that the results of scientific dating methods have generally provided good corroboration of the archaeological dating. Pottery from the firelayer at Dreggsalmenning 14–16 has been TL-dated to 1280±70, while pottery from the firelayer at Svensgården's *stallbygning* has been TL-dated to 1250 (± not known). At Finnegården 6A and Finnegården 3A, dendrochronological dating of timbers from the phase directly *following* the phase ended by the 1248 fire has provided excellent confirmation: at the former site, three timbers were dated, with felling years in 1239, 1248 and 1249; at the latter, seven timbers were dated, with felling years from 1245 to 1252.

Concerning the extent of the fire, it is readily apparent from the sites' distribution that most of the contemporary town must have been affected, from Dreggen and Kroken in the north to Vetrlidsalmenning in the south. It is likely that the fire also spread at least a little way into Vågsbunnen, the area south of Vetrlidsalmenning. Just how far south it may have reached is uncertain. No traces of the fire were found during the excavations at Holy Cross church, nor at Bankgaten/Skostredet (Golembnik in prep.), nor at Domkirkegaten 6. Of these, however, only the latter was occupied at the time of the fire by proper settlement structures – i.e., structures readily susceptible to fire – but these buildings were in fact of very limited extent and were confined to the site's northern corner, the rest of the area being open. As regards the other two, the Holy Cross church site was part of the churchyard, while the Bankgaten/Skostredet site-area was still in the process of being reclaimed from the sea.

At present, therefore, the archaeological material is unable to corroborate the historical assertion that the 1248 fire reached as far south as St Olaf's (then Olavskirken, now Bergen's cathedral). Future excavations – especially in the area between Lille Øvregate and Kong Oscars gate – may help clarify the situation. On all other points, there is good agreement between the archaeological and historical evidence.

1332

In the northern part of town, *extensive* firelayers correlated with this fire were found at Dreggsalmenning 14–16, Herteig's Bryggen-excavations, and at the 1979 Dreggsalmenning-site. *Sporadic* traces of a fire were found at Øvregaten 39, while sporadic traces of probably redeposited firelayer material turned up at Kroken 3; the main explanation for the scant remains at these two sites, particularly the lat-

ter, is that settlement intensity had substantially decreased by comparison with the preceding phases.

None of the excavated sites in the central and southern parts of Bryggen, nor indeed anywhere else in Bergen, revealed definite firelayers that could be correlated with the fire of 1332. There were sporadic traces of probably redeposited firelayer material at the minor Nikolaikirkealmenning-site, but the dating evidence was virtually non-existent. At Rosenkrantzgate 4, Lindh never even considered the possibility that the 1332 fire might have been present, since the historical sources apparently indicated that this area was not affected by a fire at that time – which may have seemed a good and sufficient reason – but methodologically this is an unsound approach for an archaeologist to adopt in relation to dating.

At both Svensgården's *stallbygning* and Finnegården 6A, considerable rebuilding was undertaken sometime during the first half of the 14th century; at Finnegården 3A, some of the foundation timbers were replaced at about the same time (4 timbers tree-ring-dated to 1303–1305). Concerning Finnegården 6A, at least the southern tenement must have been completely rebuilt; at Svensgården, the whole character of the site changed, being given over to mortar production. But at none of these sites, apparently, were these activities occasioned by a devastating fire. The question is whether or not the chronological juxtaposition of the fire and this rebuilding is merely coincidental. This will not be expanded upon here, since it does not bear directly on the topic in hand, but the question has at least been raised.

Archaeologically, there is one outstanding signpost to the identification of the 1332 fire, and that is the first occurrence of true stoneware, especially the (usually) very recognisable Siegburg products. Though experts squabble over a matter of a decade or so, it is generally held that the production of completely vitrified stoneware started in the Rhineland at around 1300, which means that the first such items must have been trickling into Bergen by the early 14th century. Somewhat simply stated, at any given site, the first firelayer to contain true stoneware ought to be an excellent candidate for the 1332 fire.

There is not much in the way of direct corroboration from scientific datings. The 4 tree-ring-dated timbers at Finnegården 3A have already been mentioned. At Finnegården 6A, 3 timbers from the rebuilding stage carried out in the early 14th century have yielded dates of 1276, 1131(!), and 1251, while 2 timbers from the rebuilding at Svensgården's *stallbygning* must have been felled in 1293 and 1228. While none of these contradict in any way the archaeological datings, their value lies perhaps more in indicating the prevalence of timber re-use at Bryggen.

On the available archaeological information, the 1332 fire affected only the northern end of town. It may have reached as far south as today's Nikolaikirkealmenning, but the evidence is very slim. The historical information, though unclear,

also indicates that the fire was concentrated in the north, with the possibility that it may indeed have included the tenement called Fatten, which was almost certainly situated immediately to the south of Nikolaikirkealmenning (Helle 1982, 184, 231). The parallels between the two sets of source material is hard to ignore, but one is reluctant to draw hard and fast conclusions on the basis of evidence that must be characterised as relatively weak.

1393/1413/1429

In the northern part of town, firelayers correlated with the fires of 1393 and 1413 were found at Herteig's Bryggen-excavations; the 1393 firelayer was confined to the southern part of the excavated area. This is the only site to have more than one firelayer dating from the decades around 1400. *Single* firelayers dated to c. 1400 were found at Dreggsalmenning 14–16 and at the 1979 Dreggsalmenning-site. Traces of a fire were also found at Øvregaten 39 but, on the strength of the archaeological material, this could as easily represent the fire of 1476 as one of the fires from around 1400.

In the central part of Bryggen, single firelayers dated to c. 1400 were found at the minor Nikolaikirkealmenning-site and at Rosenkrantzgate 4. At Svensgården's *stallbygning*, only very sporadic traces of fire were detected–perhaps not unexpectedly, since the site was no longer occupied by building structures.

In the southern part of Bryggen, single firelayers dated to c. 1400 were found at Finnegården 6A (but only in the northern tenement) and Finnegården 3A, and possibly also at Kjøttbasaren, though the traces at the latter were minimal.

South of Vetrlidsalmenning, a firelayer dated to c. 1400 was found at the Lille Øvregate *friområde*-site, while redeposited firelayer material at Bankgaten 4/Skostredet 10 would seem to indicate the occurrence of a fire here at about the same time. No traces of a contemporary fire were found at the Holy Cross church site or at Domkirkegaten 6, nor, it would seem, in any of the profiles recorded along Vetrlidsalmenning itself.

Archaeologically, it is impossible to choose between the fires of 1393 or 1413, or even 1429 for that matter, because the archaeological material cannot provide datings accurate enough to distinguish differences of a few decades, not even in conjunction with scientific datings. The latter, though few, at least provide good confirmation of the general 'c. 1400' dating: pottery from the relevant phase at Svensgården's *stallbygning* has been TL-dated to 1390 (± not known), while 2 samples of pottery from the relevant phase at Finnegården 6A have yielded TL-datings of 1330–1370 and 1380 (± not known).

It would, unfortunately, be academically indefensible to proceed with a discussion of the possible extent of the various c. 1400 fires. In effect, we would

have to say something like this: 'Interpretation of the historical sources indicates that the fire of 1413 was a relatively major affair. Therefore the firelayers at Dreggsalmenning 14–16, the 1979 Dreggsalmenning-site, Øvregaten 39, Svensgården's *stallbygning*, Nikolaikirkealmenning, Rosenkrantzgate 4, Finnegården 6A and 3A, Kjøttbasaren and the Lille Øvregate *friområde*-site must represent this fire, while the firelayer material at Bankgaten 4/Skostredet 10 must be from the fire of 1429, which seems to have affected only a few buildings in the Vågsbunnen area. Therefore the fire of 1413 must have been an extensive conflagration, whereas the fires of 1393 and 1429 were no more than 'local' nuisances.'! Clearly, this comes dangerously close to circularity.

1476

In the northern part of town, firelayers correlated with the fire of 1476 were found at Dreggsalmenning 14–16, Herteig's Bryggen-excavations, and at the 1979 Dreggsalmenning-site. At Øvregaten 39, as explained in the preceding section, a firelayer dated to the 15th century is indeed present, but may well have derived from one of the fires at around 1400 rather than from the 1476 fire. In the central part of Bryggen, firelayers dated to 1476 were found at Svensgården's *stallbygning*, at Rosenkrantzgate 4, and at Nikolaikirkealmenning. To the south, corresponding firelayers were found at Finnegården 6A and Finnegården 3A, and in most of the profiles recorded during the Vetrlidsalmenning investigation.

To the south of Vetrlidsalmenning itself, the only possible candidate is at Domkirkegaten 6, where a partial fire occurred probably sometime in the mid- or late-15th century. The problem here – apart from the fact that the archaeological material cannot provide so precise datings – is that the historical sources seem to indicate fairly conclusively that the fire of 1476 never stretched much further south than Holy Cross church. Moreover, there are two other fires that *might* have affected the Domkirkegaten 6 area in this period: the 'local' fire of 1464, which ravaged the Fransiscan monastery situated next to St Olaf's, only a stone's throw from the excavation area; and the fire of 1489, whose southern limit is uncertain but may have been located as far south as Skostredet – again, only a stone's throw from the excavation area. In the excavation report, the firelayer – rightly – was never correlated with a specific fire, and that is the way it must stay for now.

The only scientific dating connected with this fire is from Dreggsalmenning 14–16, where TL-dating of a pottery sample yielded a result of 1260±70! The source of error is not known, but at least the error is on the right side (i.e., older instead of younger than the event it is supposed to date).

From the distribution of the sites, the fire must have affected the whole of Bryggen and more, from somewhere beyond Dreggsalmenning in the north to

somewhere beyond Vetrlidsalmenning in the south. This tallies very well with the historical information.

1489

The only site with a firelayer possibly corresponding to the fire of 1489 is Domkirkegaten 6, as explained in the preceding section. One of the firelayers at the site called *Vestlandsbanken* (Rådstuplassen 2–3; Næss 1963) may well represent this fire, as occupation here evidently started sometime during the 15th century. However, since the report-work did not include a detailed investigation of the dating material, the firelayers were never correlated with historical fires. There is nothing to be gained by further discussion of this fire from an archaeological viewpoint.

1527

Firelayers correlated with this fire were found at Dreggsalmenning 14–16 and the 1979 Dreggsalmenning-site, and in the northern part of Herteig's Bryggen-excavations. This is pretty much as to be expected, according to the historical information.

Ca. 1530

Firelayers provisionally dated to c. 1530 were found at Herteig's Bryggen-excavations (in the southern area only), Finnegården 6A and Finnegården 3A. The proximity of the two Finnegården sites makes it virtually certain that these firelayers derive from one and the same fire. It therefore appears that the northern and southern parts of Bryggen must have been afflicted by two unconnected and more or less 'local' fires within a relatively short space of time, either just prior to or close on the heels of the fire of 1527. Carelessness, coincidence, or conspiracy? – a satisfactory answer, one may well fear, will not be easy to find.

Conclusions

In the main, there is a very acceptable degree of congruity between the archaeological and historical interpretations. The two sets of source material complement each other nicely, with good agreement concerning the extent of the major fires at least. This suggests quite strongly that the current archaeological-historical approach to the dating of urban sites (i.e., dating by means of the archaeological material and scientific methods first, followed by correlation with historical events) provides reliable results.

On the strength of the available archaeological information, it would appear that only a very few of the medieval fires in Bergen can be characterised as

indubitably 'local': the c. 1150 fire, and the two fires at around 1530. This has interesting implications concerning the disputed 1225/30 fire – primarily that there is *no* compelling body of evidence to indicate that the various firelayers that lie between the fires of 1198 and 1248 *must* represent a series of unconnected local fires. The degree of coincidence required by the latter scenario is surely much too great to be credible. It is therefore reasonable for archaeologists to continue to interpret these firelayers as representing a single fire that, based on the current dating evidence, must have occurred at around 1225/30.

The history of medieval fires in Bergen would appear to teach us that local fires became, almost invariably, 'great' fires. Once a fire had taken hold, it spread – often rapidly and irresistibly. One may recall that King Håkon Håkonsson and his helpers, despite heroic and life-endangering efforts (rendered in great detail in the king's saga), were unable to prevent the fire of 1248 from becoming indisputably the most catastrophic conflagration of the entire medieval period. Of course, circumstances were against them, perhaps most importantly that the fire broke out during a period of hot, dry weather. Nevertheless, the fire-fighting methods of the time would appear to have been relatively ineffective. Naturally enough, the saga credits the king and his men – and the beneficence of God – with the final extinction of the fire, but it is more realistic to believe that the fire burned itself out in the thinner settlement of the town's outskirts, after having consumed almost everything that could burn.

On the other hand, it would seem that fire prevention improved from the late medieval period – a glance at table 1 reveals a scattering of 'local' fires after the 1476 fire. In other words, the late medieval and post-medieval fires were apparently of much lesser extent compared to the earlier fires. Archaeologically, this pattern could be accounted for as a result of 'accident', in that the later deposits have naturally been subjected to a greater amount of disturbance and removal. Fortunately, however, contemporary records confirm the archaeological picture; apart from the 1702 fire, all the later fires *were* of limited extent.

This was undoubtedly due to a combination of factors. Such as, to name probably the most important, the use of fire-resistant building materials, together with an increased number of wide public thoroughfares (*almenninger*) to act as fire-breaks. Failing all else, though, fire-fighters sometimes had to take desperate measures. In the case of the 1675 fire, for instance, a number of buildings in the Dreggen area were demolished by explosives to create an artificial fire-break to prevent the fire from returning to Bryggen (where it had in fact started, but, under the influence of a southerly wind, had been blown northwards, circling around the back of St Mary's). The fire was contained, and burned itself out with a relative minimum of damage inflicted. A tactic born of necessity – but one that worked.

Bibliography

Christensson, E. A. S. 1980. *Indberetning om udgravningene ved Øvregaten/Finnegårdsgaten*. Riksantikvaren, Bergen.

Christensson, E. A. S. 1988. *Brande og kronologi i Bergen – belyst ved tre mindre udgravningsfelter*. Magistergradsafhandling ved Universitetet i Bergen.

Christensson, E. A. S., Dunlop, A. R. & Göthberg, H. 1982. *Indberetning om udgravningen i Svensgårdens stallbygning*. Riksantikvaren, Bergen.

Dunlop, A. R. 1981. *BRM 94 Øvregaten 39 1981. Report*. Riksantikvaren, Bergen.

Dunlop, A. R. 1982. *Report on the excavations in Finnegården 6A, 1981*. Riksantikvaren, Bergen.

Dunlop, A. R. 1985a. *Report on the excavations at BRM 202 Nikolaikirkealmenningen, 1984*. Riksantikvaren, Bergen. (Archive report).

Dunlop, A. R. 1985b. *Report on the excavations at BRM 200 Korskirken, 1984*. Riksantikvaren, Bergen.

Dunlop, A. R. 1986. *Report on the excavations at BRM 230 Kjøttbasaren, Vetrlidsalmenningen, 1985–1986*. Riksantikvaren, Bergen. (Archive report).

Dunlop, A. R. 1987. *BRM 223 Kroken 3. Report*. Riksantikvaren, Bergen.

Dunlop, A. R. 1994. *Report on the excavations at BRM 468 Vågentunet, 1994*. Riksantikvaren, Bergen. (Archive report).

Dunlop, A. R. & Sigurðsson, J. V. 1995. An Interdisciplinary Investigation of Bergen's Forgotten Fire: Confrontation and Reconciliation. *Norwegian Archaeological Review, Vol. 28, No. 2*: 73–92. Scandinavian University Press.

Golembnik, A. 1993. *Report on the excavations in Finnegården 3A, 1982*. Riksantikvaren, Bergen. 2nd ed.

Golembnik, A. 1994. *Report on the excavations at Dreggsalmenning 14–16, 1986 & 1990*. Manuscript. Riksantikvaren, Bergen.

Golembnik, A. *Report on the excavations at Bankgaten 4/Skostredet 10*. In preparation. Riksantikvaren, Bergen.

Hansen, G. 1994. *Den overordnede bebyggelsestopografi omkring 1190 i Bergen – belyst ut fra arkæologiske, naturtopografiske og skriftlige kilder*. Speciale i middelalderarkæologi, Universitetet i Århus, Danmark. Riksantikvaren, Bergen.

Hansen, G. 1995. *Lille Øvregate friområde BRM 465. Rapport*. Riksantikvaren, Bergen.

Helle, K. 1982. *Bergen bys historie. Bind I. Kongssete og kjøpstad; fra opphavet til 1536*. Universitetsforlaget, Bergen.

Herteig, A. E. 1985. The archaeological excavations at Bryggen, 'The German Wharf', 1955–68. In Herteig, A. E. (ed.), *The Bryggen Papers, Main Series, Vol. 1*: 9–46. Universitetsforlaget, Bergen.

Herteig, A. E. 1990. The buildings at Bryggen, their topographical and chronological development. In Herteig, A. E. (ed.), *The Bryggen Papers, Main Series, Vol. 3, Part 1*: 10–132. Universitetsforlaget, Bergen.

Komber, J., Dunlop, A. R., Sigurðsson, J. V. & Hjelle, K. L. 1994. *Innberetningen om utgravningene i Domkirkegaten 6, 1987*. Riksantikvaren, Bergen.

Lidén, H. E. & Magerøy, E. M. 1980. *Norges kirker. Bergen. Bind I*.

Lindh, J. 1979. *Rapport över de arkeologiska undersökningarna i Rosenkrantzgaten 4, 1978–79*. Top. ark., Bryggens Museum. (Archive report).

Long, C. D. & Marstrander, L. 1980. *Dreggsalmenningen i Bergen; rapport fra de arkeologiske undersøkelser, 1979*. Riksantikvaren. (Archive report).

Næss, J. R. 1963. *Innberetning om utgraving av Vestlandsbankens tomt, Rådstuplass 1 og 2, Bergen*. Top. ark., Bryggens Museum. (Archive report).

Notes

1 The set-up of these tables may require some elaboration. 'BRM' followed by 2 or 3 digits represents Bryggens Museum's site reference number. Pottery types in bold are those with the greatest number of sherds per phase; pottery types in parentheses are either *residual* or *intrusive*; pottery types followed by a digit in parentheses indicate the actual number of sherds. 'Scarb.' is 'Scarborough' abbreviated; 'Dev.' stands for 'Developed'. 'Paffrath' is the name now usually given to the type formerly known as '*Blågrå*'.

2 For the reader's benefit, the excavation at Finnegården 6A revealed that, during most of the area's history, the site was occupied by parts of two parallel tenements, each covering roughly half of the site-area and separated by an eaves-drop. It is impossible to determine whether these buildings represent single or double tenements.

Sitename	Medieval fires											Post-medieval fires						
	ca. 1150	1170/71	1198	1225/30	1248	1332	1393/1413/1429	1476	1489	1527	ca. 1530	ca. 1550	1582	1589	1623	1640	1675	1702
(Dreggsalmenningen, 1979)				?	X	X	X	X		X								
Dreggsalmenning 14-16	X	X	X	X	X	X	X	X		X								
Kroken 3	X	X	X	X	X	R/S											X	
Øvregaten 39	X	X	X	X	X	S	? either-	-or?									X	
(Bryggen: alternative I)	X	X	X		X	X	X X	X		P	X							X
(Bryggen: alternative III)		X	X	X	X	X	X X	X		P	X							X
Svensgården's *stallbygning*			X	X	X	Rb	S	X										S
Nikolaikirkealmenningen					R/S?	R/S?;	X	X										
(Rosenkrantzgate 4)				S?	X		X	X										X
Finnegården 6A		X	X	P	X	Rb	P	X			X	X						
Finnegården 3A				R	X		X	X			X				X?			
Øvregaten/Finnegårdsgaten					X													
Kjøttbasaren, 1985-86					S		S											X
Vetrlidsalmenningen		X			X			X										
Lille Øvregate *friområde*					?		X						?either-	-or?	X?		X	
Holy Cross church site															X	X		
Bankgaten 4/Skostredet 10							R						X					
Domkirkegaten 6								?either-	-or?						X	X		X
Halfdan Kjerulfsgate																		
Nygaten 2																		
Strandgaten 55-57														X	X			?

P = Partial

R = Redeposited firelayer material

Rb = Rebuilding

S = Sporadic traces

Sites with names in parentheses were not excavated, or only partly, by the Bergen excavation office.

Sites below double line lie outside the medieval town area.

Table 1. Incidence of fires at sites in Bergen.

Table 2. BRM 90 Svensgården's stallbygning

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS			DATING
	Pottery	Other	TL	^{14}C	Dendro.	
Mod.	**Stonewares**, Redwares, Delft, Claypipes, Porcelain, (Humber, Grimston, Scarb. II)	Glass				Ends 1702; no fire Starts c. 1600
1	**Stonewares**, Redwares, Delft, Claypipes, (Humber, Grimston, Scarb. II, Yorkshire, Pingsdorf, Paffrath, Aardenburg)	Glass				Ends c. 1600; no fire Starts 1476
2	**Grimston**, **Stonewares**, Redwares					Ends 1476; *partial* **fire** Starts ?
3	Yorkshire, Grimston, Scarb. II, Aardenburg, Danish/Swedish, **Stonewares**, Redwares, (Pingsdorf, Paffrath)(Claypipe)	Glass				Ends ? Starts ?
4	Yorkshire, Scarb. II, **Grimston**, **Aardenburg**, Proto-stoneware, Stonewares,	Glass				Ends ? Starts c. 1400
5	Dev. Stamford, London, Yorkshire, Scarb. II, **Grimston**, Aardenburg, Danish/Swedish, Proto-stoneware, Stonewares	Glass	1390		1228, 1293	Ends c. 1400; *minimal* **fire** Starts early 14th century
6	Paffrath, Yorkshire, Humber, Scarb. II, **Grimston**, Aarden-burg, Proto-stoneware, Stoneware (3)	Double-comb, glass				Ends early 14th century; no fire Starts c. 1250
7	Andenne, Paffrath, Pingsdorf, Yorkshire, Humber, **Scarb. II**, Grimston, London, Shelly, Aardenburg, Proto-stoneware (1)		1250			Ends 1248; **fire** Starts 1230/40
8	Andenne, **Paffrath**, **Pingsdorf**, Dev. Stamford, Yorkshire, Grimston, London				1243, 1247	Ends sometime before 1248; no fire Starts 1225/30
9	Andenne, Paffrath, Pingsdorf, London	Single-combs (2)				Ends 1225/30; **fire** Starts 1198
10	**Andenne**, Paffrath, Pingsdorf, Shelly					Ends 1198; **fire** Starts 2nd half of 12th century

Table 3. BRM 94 Øvregaten 39

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS			DATING
	Pottery	Other	TL	^{14}C	Dendro.	
1	None	None				Ends ? Starts 1675
2	Grimston (1), Stoneware (1), Redwares, **Weser**, Claypipes	Glass				Ends 1675; *minimal* **fire** Starts 1550–1600
3	Dev. Stamford, Grimston, Malaga					Ends 1550–1600; no fire Starts 15th century
4	**Grimston**, Scarb. II, Aardenburg, Danish/Swedish, Stonewares, (Redware, Weser)	Glass				Ends 15th century; *partial* **fire** Starts c. 1350
5	Yorkshire, Scarb. II, **Grimston**, Andenne, Pingsdorf, Paffrath, Danish/Swedish, Proto-stoneware (1), Stoneware (1)					Ends 1332; *minimal* **fire** Starts c. 1250
6	**Paffrath**, Yorkshire, Grimston, London, Aardenburg, (Stoneware, Delft, Jutish ware)	Double-comb				Ends 1248; **fire** Starts c. 1225/30
7	Andenne, **Paffrath**, Pingsdorf, Yorkshire, Scarb. II, Grimston, London, (Redware)	Glass (syrisk)				Ends 1225/30; **fire** Starts 1198
8	Paffrath, **Dev. Stamford**, Shelly			(925–1155)		Ends 1198; **fire** Starts 1170/71
9	**Paffrath**					Ends 1170/71; *partial* **fire** Starts c. 1150
10	None			1005–1160		Ends c. 1150; *partial* **fire** Starts ?

Table 4. BRM 104 Finnegården 6A

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS			DATING
	Pottery	Other	TL	^{14}C	Dendro.	
1	Stonewares, Redwares	Glass				Ends c. 1570/80; no fire Starts 1550/60
2	**Stonewares**, Redwares					Ends 1550/60; *partial* **fire** Starts c. 1530
3	Grimston, Aardenburg, Danish/ Swedish, **Stonewares**, Redwares	Glass				Ends c. 1530; **fire** Starts 1476
4	Yorkshire, Humber, Scarb. II, Grimston, Aardenburg, Danish/ Swedish, Proto-stoneware, **Stonewares**, Redwares					Ends 1476; **fire** Starts c. 1400
5	Yorkshire, Humber, Scarb. II, **Grimston**, Danish/Swedish, Aardenburg, Proto-stoneware, Stonewares		1380 1330/70		1131, 1251, 1276	Ends c. 1400; *partial* **fire** Starts early 14th century
6	Pingsdorf, Paffrath, Yorkshire, Humber, Scarb. II, **Grimston**, Aardenburg, Danish/Swedish, Proto-stoneware, Stoneware (1)	Double-combs (2)			1239, 1248, 1249	Ends early 14th century; no fire Starts c. 1250
7	Andenne, Yorkshire, **Humber**, **Scarb. II**, **Grimston**, London, Aardenburg, Proto-stoneware, Danish/Swedish					Ends 1248; **fire** Starts 1230/40
8	Andenne, Paffrath, Pingsdorf, Yorkshire, **Scarb. II** (2), Grimston, Humber, London, Shelly				1214	Ends sometime before 1248; no fire Starts 1225/30
9	Andenne, Paffrath, Pingsdorf, **Yorkshire**, **Humber**, **Scarb. II**, **Grimston**		1230			Ends 1225/30; *partial* **fire** Starts 1198
10	Andenne, **Paffrath**, Dev. Stamford, Yorkshire, Humber, Pingsdorf, London, Shelly, Scarb. I	Single-combs (2)			1113	Ends 1198; **fire** Starts 1170/71
11	Andenne, **Paffrath**, Dev. Stamford, Yorkshire, Humber, Pingsdorf, London	Single-combs (8)			1112, 1118	Ends 1170/71; **fire** Starts 1130/40
12	**Andenne**, Paffrath	Single-comb			1103	Ends 1130/40; no fire Starts 1110/20

Table 5. BRM 110 Finnegården 3A

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS	DATING
	Pottery	**Other**	**Dendro.**	
VII	Stonewares, **Redwares**, Clay-pipes	Glass		Ends 1702? Starts early/mid-16th century
VI	**Stonewares**, **Redwares**, Grim-ston, Humber, (Claypipes)	Glass		Ends 1520/30; *partial* **fire** Starts 1476
V	Andenne, Pingsdorf, Paffrath, Yorkshire, Humber, Scarb. II, **Grimston**, Danish/Swedish, Aardenburg, Proto-stoneware, Stonewares, Redwares (3)	Double-comb Glass		Ends 1476; **fire** Starts early 15th century
IV	Andenne, Paffrath, Dev. Stam-ford, Yorkshire, Humber, Saint-onge, London, Scarb. II, **Grim-ston**, Aardenburg, Danish/-Swedish, Proto-stoneware, Stonewares, Redwares		1303, 1304, 1305, 1305 1244, 1245, 1246, 1247, 1248, 1249, 1252	Ends c. 1400; **fire** Repair stage early 14th century Starts c. 1250/60
III	Andenne, Pingsdorf, Paffrath, Dev. Stamford, Yorkshire, Hum-ber, London, Shelly, Scarb. II, Saintonge, **Grimston**, Aarden-burg, Danish/Swedish, Proto-stoneware	Double-combs (7)	 1206, 1206, 1211, 1213, 1213, 1213, 1213, 1213	Ends 1248; **fire** Starts c. 1225/30
I	**Andenne**, Paffrath, Pingsdorf, Dev. Stamford, Yorkshire, Grimston (1), Shelly	Single-combs (4) Double-comb		Ends c. 1225/30; redeposited firelayer material Starts 1170/71
I	Paffrath (1)			Ends 1170/71; no fire Starts ?

Table 6. BRM 223 Kroken 3

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS			DATING
	Pottery	Other	TL	^{14}C	Dendro.	
1	Stonewares, **Redwares**, Earthenwares, Weser, Claypipes, (Humber, Grimston, Danish/Swedish)	Coin dated 1667 Glass				Ends 1675; **fire** Starts mid-17th century
2	None					Ends early/mid-17th century; no fire Starts early/mid-17th century
3	Stonewares, **Redwares**, Earthenwares, Delft, Claypipes	Coin dated 1621 Glass				Ends early/mid-17th century; no fire Starts early 17th century
4	Yorkshire, Scarb. II, Grimston, Aardenburg, Danish/Swedish, Protostoneware, **Stonewares**, Redwares, Claypipe (1)	Glass				Ends c. 1600; no fire Starts c. 1400 or later
5	Yorkshire, Humber, **Scarb. II**, **Grimston**, Aardenburg, Protostoneware, Stonewares (2)	Double-comb				Ends c. 1400; no fire Starts mid-14th century
6	Scarb. I, **Humber**, **Scarb. II**, **Grimston**, Aardenburg, Proto-stoneware					Mid-14th century; no fire
7	Andenne, Pingsdorf, Paffrath, Dev. Stamford, Shelly, London, Yorkshire, Humber, Scarb. II, **Grimston**, Aardenburg, Danish/Swedish, Protostoneware, Stonewares (4)	Double-combs (2)				Ends 1332; *partial* **fire** Starts later 13th century
8	Paffrath, Pingsdorf, Dev. Stamford, Shelly, Yorkshire, Humber, **Grimston**					Ends later 13th century; no fire Starts 1248
9	Andenne, Paffrath, Pingsdorf, **Dev. Stamford**, Shelly, London, Scarb. II, Grimston, Aardenburg (1), Protostoneware (1)					Ends 1248; **fire** Starts 1225/30
10	Andenne, Pingsdorf, **Paffrath**, Dev. Stamford, Yorkshire, Grimston, London, Shelly					Ends 1225/30; **fire** Starts 1198
11	Andenne, **Paffrath**, London, Shelly	*Agnes Dei*-brooch, Urnes style	1280±50			Ends 1198; **fire** Starts 1170/71
12	**Paffrath**					Ends 1170/71; *partial* **fire** Starts c. 1150
13	None					Ends c. 1150; *partial* **fire** Starts ?
14–17	Phase 14 - Yorkshire (1); Phase 15 - N. French (1)					Early 12th century; no fires

Table 7. BRM 237 Dreggsalmenning 14–16

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS		DATING
	Pottery	Other	TL	^{14}C (calibrated)	
1	None	2 Christian IV coins; double-combs (6)			Ends ? Starts 1527
2	(Pingsdorf, Humber, Yorkshire, **Grimston**, Scarb. II, Aardenburg, Danish/Swedish)				Ends 1527; *partial* **fire** Starts 1476
3	Paffrath, Pingsdorf, Humber, Yorkshire, Scarb. I, **Grimston**, Scarb. II, Aardenburg, Danish/-Swedish, Stonewares, Redwares		1260±70		Ends 1476; **fire** Starts mid-14th century
4	Andenne, Pingsdorf, Dev. Stamford, Shelly, London, Humber, Yorkshire, Scarb. I, **Grimston**, Scarb. II, Aardenburg, Danish/-Swedish, Proto-stoneware, Stonewares (3), (Redwares)				Ends 1332; **fire** Starts later 13th century
5	Paffrath, Pingsdorf, Humber, Yorkshire, Scarb. I, **Grimston**, Scarb. II, Aardenburg, Danish/-Swedish, Stoneware (1)	Single-comb			Ends later 13th century Starts c. 1250
6	Andenne, Paffrath, Pingsdorf, Saintonge, Dev. Stamford, Shelly, London, Humber, Yorkshire, Scarb. I, Grimston, **Scarb. II**, Aardenburg, Danish/Swedish, Proto-stoneware, (Redwares)	Single-comb	1280±70		Ends 1248; **fire** Starts c. 1225/30
7	Andenne, **Paffrath**, Pingsdorf, Dev. Stamford, Shelly, London, Humber, Scarb. I, Grimston, Scarb. II (1), Aardenburg	Single-comb		1000–1030	Ends 1225/30; **fire** Starts 1198
8	**Andenne**, Paffrath, Pingsdorf, Northern French, Dev. Stamford, Shelly, Humber		1340±40		Ends 1198; **fire** Starts 1170/71
9	Andenne, **Paffrath**, Northern French			1170–1270 1220–1280	Ends 1170/71; **fire** Starts c. 1150
10	None		1190±40	1030–1190	Ends c. 1150; *partial* **fire** Starts ?

Table 8. BRM 245 Domkirkegaten 6

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS		DATING
	Pottery	Other	^{14}C (calibr.)	Dendro.	
1	Stonewares, **Redwares**, Weser, Earthenwares, Delft, Jutish ware				Early/mid-18th century; no fire
2	No finds				Early 18th century; no fire
3	Weser, Werra, **Krefeld**, Claypipe				Ends 1702; *partial* **fire** Starts 1640
4	**Redware**				Ends 1640; *partial* **fire** Starts 1623
5	Yorkshire, Scarb. II, Grimston, Andenne, Paffrath, Aardenburg, Danish/Swedish, Stonewares, Redwares, Delft, Weser, Werra	Glass			Ends 1623; *partial* **fire** Starts c. 1570/80
6	Paffrath, London, Shelly, Humber, **Yorkshire**, **Grimston**, Scarb. II, Aardenburg, Danish/Swedish, Proto-stoneware, Stonewares	Comb Glass			Ends mid-/late 15th century; *partial* **fire** Starts c. 1350
7	Andenne, Paffrath, Pingsdorf, Dev. Stamford, London, Shelly, Humber, Scarb. I, Yorkshire, Scarb. II, **Grimston**, Aardenburg, Proto-stoneware	Comb Glass	1260–1280 1260–1290 1170–1270 1220–1280 1220–1280	 1269	Ens c. 1350; no fire Starts c. 1280
8	Andenne, Paffrath, Pingsdorf, Dev. Stamford, **London**, Shelly, Humber, Scarb. I, Yorkshire, Scarb. II, Grimston, Aardenburg, Proto-stoneware (1)		1220–1280 1280–1400		Ends c. 1280; no fire Starts early 13th century
9	Andenne, **Paffrath**, Dev. Stamford, London, Shelly, Humber		1010–1170 1050–1260	1115, 1127, 1154, 1155, 1156, 1156, 1157	Ends early 13th century; no fire Starts 1160/70
10	**Andenne**	Single-comb		1128	Ends 1160/70; no fire Starts 1130/40

Table 9. BRM 346 Bankgaten 4/Skostredet 10

PHASE	ARCHAEOLOGICAL EVIDENCE		SCIENTIFIC DATINGS	DATING
	Pottery	**Other**	**Dendro.**	
II	Details not currently available	Glass		Ends 1582; **fire** Starts mid-16th century
III	Details not currently available	Double-comb		Ends 1520/30 Starts 2nd half of 15th century
IV	Details not currently available	Double-combs (8)		Ends 2nd half of 15th century Starts c. 1430
V	Details not currently available	Double-combs (2) Single-comb		Ends 1429 (?); redeposited fire-layer material Starts late 14th century
VI	Yorkshire, Grimston, Humber, Danish/Swedish, **Stonewares**	Double-comb		Ends late 14th century Starts 1st half of 14th century
VII	Yorkshire, **Grimston**, Humber, Aardenburg			Ends 1st half of 14th century; no fire Starts late 13th century
VIII	None			Starts/ends 13th century; no fire

Table 10. Major medieval fires, major sites, datings

Fire		Sites with correlated firelayers [1]	Pottery dating [2]	Scientific datings	Approx. terminus post quem
Historical	Archaeol.				
	ca. 1150	Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Bryggen: alternative I	Uncertain	^{14}C: 1005–1160; 1030–1190 *TL*: 1190±40	–
1170/71		Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Finnegården 6A, Bryggen: alternatives I & III	ca. 1150	*Dendro.*: 1112, 1118 ^{14}C: 1170–1270; 1220–1280	ca. 1150
1198		Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Svensgården's *stallbygning*, Finnegården 6A, Bryggen: alternatives I & III	ca. 1150	*Dendro.*: 1113 ^{14}C: (925–1155) *TL*: 1280±50; 1340±40	ca. 1150
	1225/30	Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Svensgården's *stallbygning*, Finnegården 6A, Finnegården 3A, Bryggen: alternative III (Dreggsalmenningen 1979; Rosenkrantzgate 4?)	1215–1225	*Dendro.*: 1113 ^{14}C: 1000–1030 *TL*: 1230	1215–1225
1248		Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Svensgården's *stallbygning*, Finnegården 6A, Finnegården 3A, Bryggen: alternatives I & III, Dreggsalmenningen 1979, Rosenkrantzgate 4	ca. 1230–1240	*Dendro.*: 1206, 1206, 1211, 1213, 1213, 1213, 1213, 1213, 1214 (1243, 1247) *TL*: 1250, 1280±70	ca. 1240
1332		Dreggsalmenning 14–16, Kroken 3, Øvregaten 39, Bryggen: alternatives I & III, Dreggsalmenningen 1979	ca. 1300		ca. 1300
1393/ 1413/ 1429		One or more of these fires present at most sites, but impossible to distinguish			
1476		Dreggsalmenning 14–16, Svensgården's *stallbygning*, Finnegården 6A, Finnegården 3A, Bryggen: alternatives I & III, Dreggsalmenningen 1979, Rosenkrantzgate 4	ca. 1450	*TL*: 1260±70	ca. 1450
1527		Dreggsalmenning 14–16, Bryggen: alternatives I & III, Dreggsalmenningen 1979	Uncertain		–

1) Major sites. 2) Production start of presumed youngest type.

Asbjørn E. Herteig

The 'forgotten' fire in Bergen

With reference to six for the greater part lesser excavations since 1980 in and around the Bryggen area, serious and intelligent attempts have been made to correlate fire layers with the historical fires and the documented ones from the extensive Bryggen excavations 1955–79.

In his article, Rory Dunlop maintains that these excavations have revealed traces of a hitherto unknown fire which must have destroyed most of the then central parts of the town around 1225–1230, an effort Knut Helle in his extensive article on the historical recorded fires in Bergen seems to find questionable.

As a consequence, Dunlop's article 'is intended as a counterpart to Helle's article'. This counterpart, as well as the articles of Dunlop and Sigurðsson (1995) are, however, totally void of field documentation which is an absolute precondition for anybody who might wish to control the presented arguments: that means a three dimensional documentation based on commented plan-drawings, sections and photos. This is a job that by no means can be left to the critical reader. As the 'forgotten' fire is equated with one of the fires in the Bryggen excavation prior to the 1248 fire, I have been asked to comment on the local dating problems.

According to the Bryggen chronology, the earliest registered fire has been referred to around 1140–1150, followed by fires in 1170/71 and 1198, the later two are historically documented (Herteig 1990/1991). As a consequence of the postulated fire in 1225–30 it is argued for a reassessment of the Bryggen chronology by eliminating the 1140–1150 fire and equating the 1170/71 fire with 1198, and 1198 with the unknown 1225–30 fire.

Initially, I find it relevant to recapitulate that one of the main purposes of the Bryggen excavation was to establish a relative and – as far as possible – an absolute chronology of the site. In fact this meant documenting the relations between the building phases. A primary factor here was the fire layers, since written sources indicated the presence of eight or nine fires in the area. In the chronological context it was nevertheless the layers or cultural horizons which were the most essential units, whether combined with remains of buildings or not.

According to my knowledge, the relative chronology has been generally accepted. The absolute chronology was not easy to establish, in spite of the fact that the archaeological material was overwhelmingly rich. Neither did we dispose of pottery specialists, nor was the state of research of leading find groups such as pottery-types sufficiently developed to serve as a base for an absolute chronology. Moreover, we were recommended not to submit samples to C14 analyses. We therefore had to rely on the identification of the fire layers as our main source of absolute dating. The sequence of fires has been thoroughly documented through the whole site and interrelated by dozens of sections. It has, however, been foreseen that details of course might be adjusted as a result of the following scientifical research of the different material groups. In fact this happened in *Bugården* and the adjacent parts of *Engelgården* when results of the preliminary analysis of dateable English medieval pottery was at variance with the accepted explanation of the development (Herteig 1990, part I, 45–47). So far the absolute dating of the fire layers back to and including the fire of 1248 has found general accept. The crucial point seems to be associated with the dating of the 1198 fire with evident consequences for the earlier ones.

Dunlop has had to deal with smaller excavations, at times comprising only a few square metres and often with disconnected patches of ash and fire. The intention of introducing a new unrecorded fire within an historic period is rather daring, and should therefore be based on a thorough documentation. This is, however, not the case. As the longer connected lines are missing, stronger demands should be expected on the interpretation of the field context. The chronological arguments are based on a reassessment of existing dendroanalyses, detailed analyses of ceramic material, Thermoluminescence (TL) and C14 dating. But the interpretation of identified and interrelated phases is not documented in any printed publication, and this concerns all excavations.

According to Dunlop six excavations in or around the Bryggen area have yielded indications of a fire sometime around 1220–1230. These are, from north to south: *Dreggsalmenning* 14–16, *Kroken* 3, *Øvregaten* 39*, Stallen in Svensgården, Finnegården* 6A and *Finnegården* 6B. *Dreggsalmenning* 14–16, *Kroken* 3 and *Øvregaten 39* are situated in the northern part of Bryggen around St. Mary's, and border the Bryggen excavation, *Stallen* lies in the middle and *Finnegården* in the southern part of Bryggen. In the following I will try to exemplify my contention with individual references to both Dunlop and Hansen. Dunlop's suggestion of a forgotten fire around 1225–1230 has been based on excavation reports from the sites in question. These very detailed reports seem to be carefully made and reflect acute observations, but the credibility of the interpretations of the 'scattered patches' of fires are not able to convince.

Dreggsalmennning 14–16 *excavated by A. Golembnic*

Documentation of the excavated site is scattered on a large number of drawings, sections and comments, and has so far not been published or resumed. It is therefore impossible to make a re-evaluation of the preliminary conclusions, according to which eight medieval fires is said to have destroyed the site. The earliest being one at the middle of the 12th century, c. 1150, the next 1170/7l, 1198, 1225–1230, 1248, 1332 and one in the 15th century.

The three earliest fires have yielded no finds, and do in fact consist of only small patches of fires. About 1150 'traces of fire registered *in situ* can prove that the neighbouring structures were in a strong fire', and 'a thin layer of charcoal and burned moss' (report 1986/90) is referred to the 1198 fire. The so-called 'forgotten fire' (1225–1230) consists of 'four patches of burned material' (op. cit.); one in the eastern part, the other close to the end of the site about 25 m further west. 'It is difficult to determine the character of the small burnt planks ... There was no doubts they were replaced, but it was obvious they belong to the structure which was burnt in this place, or in the nearest vicinity' (op. cit.). According to the excavator, the small parts of fire in the western corner of the site 'doesn't indicate that the area was in real fire' (op. cit.). To my mind it is impossible to judge if this 'fire', as well as the previous ones, has been total or local. No finds derive from the registered 'patches of fire', and the stratigraphy between the two localities has not been possible to verify.

Referring to the many stratigraphic stumblestones in the extensive Bryggen excavation, I find it extremely daring to draw the far-reaching conclusions of a so-called forgotten fire based on 'patches of fire', suggested dating of pottery and TL analyses with their wide time-span.

Kroken 3 *excavated by A. R. Dunlop*

In *Kroken* 3, all 16 phases have been registered, the occurrence of fires are, however, very scarce and the dating of the pottery may be questionable. I can see no reason why the pottery dated to phase 10 (ended 1220–1230) cannot be correlated with phase 11/12, which ended 1198, based as it is on Shelly – Sandy ware, Paffrath, *svartgods* and a single fragment of Developed Stamford. Most of the sherds were in fact found in phase 9 said to end in 1248, but there interpreted as redeposited. As a consequence of the dating of phase 10, the earlier phase 11 have been correlated with 1198, while 1170/71 might as well be preferred as it is, largely based on the same type of pottery.

Øvregaten 39 *excavated by A. R. Dunlop*

In *Øvregaten* 39, the layers older than mid 13th century were largely disturbed with a mixture of finds covering a large time-span. The point of departure for the

Øvregaten chronology is a postulate: Starting with the earliest phase 8, which has early 12th century pottery, but no dateable find in the fire layer. Dunlop maintains that this phase therefore 'is believed to start in the later 12th century and was probably destroyed in the historical fire of 1198'. 'Phase 7 begins then at about AD 1200, and probably lasted until about AD 1225–1230' (report 1981).

The pottery evidence of a fire at *Øvregaten* 39 in 1225–1230 is the presence of only small amounts of Grimston and Scarborough fabric II in exclusively occupation/destruction contexts. This seems all right for the start of a phase after 1198, but it does not contradict a duration to 1248, especially because the structure ending in 1248 is problematic with a mixture of datable pottery from Andenne, Pingsdorf, Paffrath to post medieval pieces, Delft, clay-pipes etc. In my view, it is impossible to verify this phase. At any rate it is not possible to base a reassessment of the established chronology on it. Dunlop is himself not satisfied with the results of this excavation. The small area taken into account, the gravely disturbed layers in a lot of the identified phases, the scarcity of dateable finds in the registered fire layers, the admitted large amounts of redeposited material – all make it difficult to establish an absolute chronology.

Stallen in Svensgarden *excavated by A. R. Dunlop*

Fires in 1198, 1225–1230, 1248 and the 14th century are attributed to this site. The oldest fire is suggested to have occurred 1198, therefore the next is expected to occur about 1220. In the fire layer was one fragment of glazed London Brown, which 'would not invalidate an early 13th century' (report 1980). The ceramic dating of the phase which ended in 1198 (phase 10), might, according to my mind, just as well be equated with the fire in 1170/71. Dunlop admits that 'It must be stressed that the majority of the suggestions presented in this section (the dating section) are still somewhat speculative' (op. cit.).

Finnegården 6A *excavated by A.R. Dunlop*

The dating at *Finnegården* 6A is mainly based on pottery, 'but most of the pottery types found commonly in *Finnegården* cannot be dated to within less than a 100 years and many have time-ranges (e.g. Grimston and Pingsdorf) of several hundred years' (report 1982).

There is much to be said in favour of the assertion of three fires before 1248 in *Finnegården*, but the chronology ought to have been better and more accurately defined. Phase 11 'is burned around the 3rd quarter of the 12th century' (op. cit.) (1170/7l). Phase 10 'is believed to have been destroyed by fire something at the end of the 12th century' (op. cit.) (1198), but might just as well be 1170/71. The succeeding Phase 9 is one of the worst preserved phases. The presence of a fire

which 'probably ended at the beginning of the 2nd quarter of the 13th century' (op. cit.) (1225–1230) is rather daring, as its documentation is only based on three pieces of planks. The dating is based on the presence of a few sherds of Grimston and Scarborough fabric II type.

Finnegården 3 A *excavated by A. Golembnic*

At this site 'the only evidence was in the shape of a single layer interpreted as redeposited charcoal derived from a fire – but there was a stratigraphic correlation with the 1225–1230 fire layer at the neighbouring *Finnegården* 6 A site' (report 1982). No documentation is presented.

In the preceding comments I am trying to focus on the accidental character of the fire layers and the problems in interpreting them as parts of regular or total fires, or more local incidents. In most cases there is a shortage of solid arguments, and the excavators themselves have made reservations as to the validity of their suggestions in the reports.

Dreggsalmenningen 14–16 is e.g. the largest in extent, but the traces of fire on which the interpretation is based consist of extremely small remains about 25 m apart without any indication in between and without documented cohesion in the interjacent layers from which the dated material derives. The excavator also admits that 'it is difficult to determine the character of the small (burnt) planks' (report 1986/90). 'At this site and *Kroken* 3, the TL-dating of the 1198 fire was too much at variance with the archaeological dating' (op.cit.). The difference is supposed being due to a special find context, the consequence of which can not be documented.

In other cases the dendro datings are rather liberately interpreted as e.g. in *Finnegården* 6 A, in which a felling date of AD 1113 'certainly doesn't contradict the fire layer's correlation to the fire of 1198 ...' (op.cit.). In itself this is correct, but a reference to the historically documented fire in this area during the winter of 1170/71 might have been nearer at hand. Moreover, this important dendro date was taken from a post, while dendro samples from posts are systematically disregarded when dealing with the Bryggen chronology (Hansen 1994).

In *Finnegården* 6 A and *Kroken* 3 the identification of the 'new' fire also needed special explanation, because TL-analyses were much at variance with the archaeological material. Dendro dates from *Stallen* showing results too late were explained by some 'errors' which 'may have crept in ...' (Dunlop, this volume).

The stratigraphical and chronological problems in *Øvregaten* 39 have been referred to. In spite of Dunlop's brave efforts to establish an absolute chronology for the site, the result is highly tentative and can by no means be taken as argument for a so-called forgotten fire. Other examples might be mentioned.

In spite of careful analyses of Dunlop, I have the impression that there is a common flaw in his argumentation in so far as he has based his documentation on unsafe premises, and has overestimated the validity of these. The archaeological dating methods based on pottery may also be questioned. Dunlop admits that dating by pottery types 'is not unproblematic' (Dunlop, this volume). Besides, the earliest start of the production of several pottery types has been under constant revision during the last 30 years, as a result of extensive excavations both in England and on the Continent. To postulate a *terminus post quem* for a particular phase on the very earliest occurrence of a pottery type one ought to call for some caution – especially when postulating a new and undocumented fire within a historic period, well recorded through written sources.

The same caution ought to be expected when dealing with the dendro dates, as well as the Thermoluminescence dated material, the latter with too wide time brackets to be of any value within this short time-span of 20–25 years. It ought in fact to be discarded completely.

Likewise, the use of dendrochronology is in some cases dubious and one-sided, because the correct answer depends upon the logs being redeposited or new. In the case that this information cannot be documented, the answer is open.

It seems, however, that those who advocate the 1225–1230 fire tend to accept all dendro dates just in their being older than the postulated fire date, regardless of the registered felling date. Younger dendro dates contradicting their chronology are usually explained away in some way or another. On the other hand, the chronological value of the archaeological material behind the established Bryggen chronology is minimised or disregarded. The most crucial point in my criticism, however, is the absence of a documented finds context and correlated sections, because this is the only means by which a proposed dating can be controlled.

If the several 'patches' of a fire really should have destroyed the Bryggen area from *Finnegården* 3 A and 6 A in the south to *Øvregaten* 39, *Kroken* 3 and *Dreggsalmenning* 14–16 in the north, I find it irreconcilable with the silence in our written sources, especially because this area included four, possible five, churches: St. Mary's, the chapel of St. Lawrence, St. Peter's, the church of St. Nicholas' and The Stone church (St. Columba). They can not completely have evaded such a catastrophe.

The Bryggen chronology

While Dunlop has concentrated his evaluation of the stratigraphical and chronological aspects of the excavations in question, the aim of Gitte Hansen has been to re-evaluate the dating of the fire layer sequence in the Bryggen excavation before Fire V (1248).

The excavation methods and dating at Bryggen have been thoroughly documented and published (Herteig 1969; 1985). In this paper I have tried to recapitulate why we had to build our absolute chronology on the identification of the sequence of fires of which seven covered the whole site, two of them parts of the site, and two were completely local fires restricted only to parts of a single house. On the other hand stratigraphical and chronological problems were inherent in the huge masses of dumped refuse in front of the quays. Practically and stratigraphically chronological errors that might derive from this material, has, however, no implications for the dating of the fires before 1248.

In discussing the problems associated with our dendro samples, we first have to reduce the expectations which have been foreseen during the recent years. Our main intention of the dendro sampling was solely to use it as a method of controlling contemporaneity of logs in foundations, which might consist of up to 32 layers of logs. It is, therefore, misleading to lay too much stress on the sampling methods. As time has passed, however, this material has proved valuable also for C14 analyses, and consequently for absolute dating purposes. I do, however, fairly well admit that my total rejection of the dendro analyses was a bit too hasty (Herteig 1990, 16), but still, its main obstacle is associated with the extent of re-used material, a matter well known from medieval excavations in Norway.

The first C14 dated dendro samples showed a large discrepancy between these dates and the fire based chronology. If the Bryggen chronology should be maintained, it would in fact mean ca. 90–100 % reuse of material, according to Thun & Gulliksen (op.cit.). They therefore proposed 'equating each fire layer with the fire date preceding the one usually assumed' (op.cit.). That would mean a more acceptable reuse of ca. 30–40 %. For other reasons I could not accept the then presented results (op.cit., pp. 10–19).

As already mentioned, three fires were registered before Fire V (1248) during the Bryggen excavation, whereas only two are known from written sources (the first, AD 1170/71, the next, AD 1198). Thus, three options were at hand: the unrecorded fire might be

(I) older than 1170/71,
(II) between 1170/7l and 1198 or
(III) after 1198, but earlier than 1248.

After having analysed the pro & cons, I found alternative (I) most likely. On the other hand, Dunlop and Hansen referring to the occurrence of Developed Stamford and Scarborough fabric type II ceramic in Fire VI, argue for a dating of this fire not earlier than the 1220s (alternative III). An apparently strong argument for this interpretation has been found in a dendro sample from a log in foundation *Kar*

17 burnt in Fire VI, 1198. The sample no. 1337 has shown a felling date of AD 1224, while no. 0121 has been associated with AD 1229. The latter must, however, be left out of consideration, due to some misunderstanding.

Of 50 samples dendro dated to Period 3 (1170/71–1198), five have been discarded for having been too young, whereas by far the greater part of the remaining samples have been felled during the 1160s and 1170s, and therefore ought to be accepted arguments in favour of the established chronology. But Gitte Hansen (1994) keeps to the sample with felling date 1224 and concludes that 'Based upon the dendro dating from period 3, Fire layer VI shall most likely be dated to after 1224/29, in correspondence with alternative III'. This sample is, however, no longer valid (Hansen, this volume). Seen as a whole, the dendro samples are subject to too much uncertainty to accept only one sample to disrupt the established Bryggen chronology. The new information about the validity of the sample confirms this impression. Hansen's wide use of dendro dating seems otherwise to be at great variance with the attitude of our colleagues in Trondheim (Christophersen & Nordeide 1994).

In a few instances the Bryggen chronology has been anchored to dateable finds, *in casu* two runic inscriptions. One of these has been associated with King Sverre Sigurdsson's eldest son, Sigurd Lavard, who died 25 years old in AD 1200. The inscription was found just under the floor of Building 98 which initially was dated to Period 3, burnt in 1198, but later associated with Period 4, burnt in 1248.

This later dating and the 'methodological unsafe in dating a single object from a redeposited layer which we really do not know the origin of' (Hansen 1994, 156; cf. Hansen this volume note 4) leads Gitte Hansen to reject the inscription as a convincing argument for upholding the established dating of Fire VI (1198). This is, however, a too hasty conclusion. It is correct that Building 98 did burn in 1248, but was constructed after the fire in 1198, almost contemporary with Sigurd Lavard's death. Nor does her reference to a redeposited layer, which we do not know the origin of, hold water. Irrespective of where the inscription had been dropped or lost, Sigurd Lavard could not possibly have been trusted the important task he was to perform earlier than ca. 1190. Then he would have been 15 years old. The inscription derived from a redeposited material layer from the occupation phase (between ca.1190 and 1198) and was deposited in the levelling process connected with the erection of Building 98 after the fire, and this building lasted as far as to the fire in 1248. The inscription is therefore still a good argument for abiding by the established chronology by equating Fire VI with 1198.

The other inscription is with reference to some epigraphic elements in the inscription, associated with the Bergen coin issues in the later part of King Sverre Sigurdsson's reign 1184–1202 (Skaare 1984). This inscription was found in the

refuse dumped before rebuilding after the Fire VI, 1198, and just as the former inscription, it has been taken as a good argument for the dating of Fire VI to the 1198 fire.

The principal argument of those who advocates the forgotten fire, is based on the presence of Grimston and Scarborough fabric II type wares and pottery of Developed Stamford, found in small quantities in the peripheric sites as well as in Bryggen Fire VI (1198). Grimston and Scarborough wares are normally absent before the 1220s, according to the present state of research. The finds in 1198 contexts therefore are supposed to favour the assumption of a new fire at about 1220–30.

In Gitte Hansen's latest chronological discussion (this volume), her aim is to re-evaluate 'the absolute chronology of the fire layer sequence before Fire V' based on 'dendrochronological samples and the ceramic material from the Bryggen excavations'.

As this study now has confirmed the Bryggen chronology regarding the historical recorded Fire VII, I shall limit my comments on her dating of the unregistered Fire VIII besides a few comments on Fire VI.

Hansen has two dendro datings – 1024 and 1040 – from Building 66, and indicates that this building ought to have been built shortly after 1040. In fact, this building was burnt in Fire VII (1170/71). If her dating should be correct, Building 66 would have been in use for 120–130 years. This is, however, totally unlikely. Building 66 was a one story 'open' shelter apparently with a turf-covered roofing, and cannot have escaped the fire which destroyed Building 45, five to seven meters away, and which left traces close to Building 66. The dendro samples must therefore have been taken from reused wood (Herteig 1991, part II, 87, 92). Another factor which tends to favour a later erection, is the very slender material used in Building 66 as compared with the reminiscences of the earliest documented phase, in which much more solid material were employed. Nor is the assumption trustworthy, that available material from former buildings would have been scarce, because at that time (mid 12th century) the area would have been inhabited for at least 400 years. One will therefore have to accept Building 66 as a much younger structure than assumed. Nor do I accept her dating of Building 42 which has the dendro date of 1078, as there is no reason to assume that the double tenement to which Building 42 belonged, was introduced before Phase 2.1 (1170/71). Just after that fire, the beach zone with this tenement was incorporated in the built up area (Herteig 1991).

Hansen's aim of throwing new light on the periods before Fire V (1248) has so far been reduced to the new dendro dates regarding Fire VIII and a confirmation

of Fire VII, according to the Bryggen chronology. As for Fire VIII, the new dating is, however, of crucial importance in bridging the chronological gap between the reign of King Olaf Haraldsson Kyrre (1067–93), the founder of Bergen, and the hitherto oldest archaeological remains. Furthermore, this has rather far-reaching consequences of our understanding of the foundation process. According to Hansen's opinion, Fire VIII took place about 1120, while it by me was tentatively dated to 'around 1140–1150' (op.cit. 199l, 1996). In this fire the said Building 45 was destroyed. It seemed to have been 'in an excellent state of preservation and showed little sign of wear, but as the building had been extended at a later stage, it must have functioned for some 15–20 years' (op. cit.). Its erection was therefore estimated to have been between 1125 and 1130.

According to Hansen's dendro dates, Building 45 must have been erected shortly after 1110, probably between 1110 and 1115. If she maintains her dating of Fire VIII to ca.1120, this would in fact reduce the life time of the building to between five and ten years – and that seems quite unlikely. In fact, there is quite as good reasons for dating the fire to ca. 1130, or even later, because her dendro dates reflect building activity during the entire period between 1120 and 1150.

To sum up, I find it extremely promising that 'the forgotten' fire has found a reasonable satisfactory position, and that the Bryggen chronology virtually has been confirmed. In spite of that, I do not feel quite comfortable, because both the ceramic material and the dendro samples provide 'two dating suggestions for Fire VII, as well as for Fire VI' (Hansen, op.cit.). Her association of Fire VII with the fire of 1170/71 is based on a 'qualified guesswork'. As for Fire VI, the ceramic material contradicts the dendro dating. Confronted with this dilemma, Hansen finds support in (1) the rather detailed first hand observations of a fire in the Bryggen area August 10th 1198, and (2) in referring to 'archaeological material from sites surrounding the Bryggen site'. The latter argument is, however, not convincing, as the chronology of these sites is contested.

According to my opinion, Hansen's persistent efforts are therefore not completely brought to an end. She will most likely have to wait for further excavations or a reassessment of English ceramics. On the other hand, the consequences of dating Building 45 back to soon after 1110 is perhaps the most encouraging result of her study, and as such a worthy appreciation.

Bibliography

Blackmore, L. & Vince, A.1994 Medieval pottery from southeast England found in the Bryggen excavation 1955-68. In *The Bryggen Papers, Supplementary Series*, vol. 5, 9-161, Bergen.

Christophersen A. & Nordeide, S.W. 1994 *Kaupangen ved Nidelva. Riksantikvarens Skrifter 7*. Trondheim.

Hansen, G., 1994 *Den overordnede bebyggelsestopografi omkring 1190 i Bergen*. Riksantikvarens Utgravningskontor for Bergen, Bergen.

Herteig, A.E., 1969 *Kongers havn og handels sete*, Oslo.

Herteig, A.E., 1985 The archaeological excavations at Bryggen, «The German Wharf», in Bergen 1955-68. In *The Bryggen Papers, Main Series*, vol. l, Bergen.

Herteig,A.E.,l991 *The buildings at Bryggen, their topographical and chronological development. The Bryggen Papers, Main Series, vol 3*, part 1 and 2. Bergen.

Lüdtke, H., 1989 The Bryggen pottery 1. Introduction and Pingsdorf Ware. In *The Bryggen Papers, Supplementary Series, vol.4*, Bergen.

Skaare, K., l984 Coin finds from Bryggen, *The Bryggen Papers, Supplementary Series* 1. Bergen.

Thun, T. & Gulliksen S., 1990 Dating a floating tree-ring chronology from Bryggen in Bergen, In *The Bryggen Papers, Main Series, vol.3,* part 1, 135-144, Bergen.

FAGBOKFORLAGET

The Bryggen Papers present results based on the archaeological material from the excavations at Bryggen and other medieval sites in the town of Bergen. Starting out as a bishop's seat and regional royal administrative and residential centre, Bergen in the 12th and 13th centuries developed into the first truly international trading centre of Scandinavia and one of the most important ports of northern Europe, at the same time becoming the first capital of the Norwegian kingdom.

The Supplementary Series of the Bryggen Papers contain studies on central subjects, preliminary results and thematic presentations. The aim is also to stimulate methodological and theoretical debate as well as interdisciplinary approaches. The present volume focuses on problems concerning the medieval fire-chronology of Bryggen and Bergen in general. Eight medieval conflagrations and a couple of more restricted fires are known to have taken place at Bryggen, having major consequences for urban life and development. The fires have also given a unique opportunity for dating archaeological finds as well as raising important methodological challenges.

Authors in this volume:

A. Rory Dunlop: *Project Manager, NIKU, Norwegian Institute of Cultural Heritage Research, Bergen.*

Gitte Hansen: *Junior Research Fellow, Department of Archaeology, University of Bergen.*

Knut Helle: *Professor of medieval history, Department of History, University of Bergen.*

Asbjørn E. Herteig: *Former Senior Curator and leader of the Bryggen Excavations.*

Ingvild Øye: *Professor of medieval archaeology, Department of Archaeology, University of Bergen.*

ISBN 82-7674-501-6

9 788276 745016