

CHAPTER 2

St Olav's Church in Tønsberg. The Excavation of 1969–70 in Retrospect

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Location

The location of the round church dedicated to St Olav must have made a huge impression on visitors to Tønsberg during the Middle Ages. It was situated on the outskirts of the urban settlement, at the end of Storgaten, or Long Street (fig. 1). The terrain rises gradually from the fjord towards the hill Haugar. In this area we find the oldest traces of human activities in the district, mainly farming fields but also several prehistoric burials. Along with the other monastic buildings between Haugar and the fjord, the church building must have dominated the view for anyone coming by sea from the southeast.

From St Olav's Church, Storgaten runs northwest towards St Lawrence's Church at the far end, the great basilica next to the Royal Palace by the sea. Rising behind St Lawrence's is the impressive Slottsfjellet ('Castle hill') with St Michael's Church. Along Storgaten, between the churches of St Olav and St Lawrence, there are the churches of St Mary and St Peter, both parish churches during the Middle Ages.

The many churches within the town, including the small hill Haugar with its the ancient tumulus, suggest that there was some planning in the development of the town. In what way might St Olav's church be part of a religious landscape, or cityscape?

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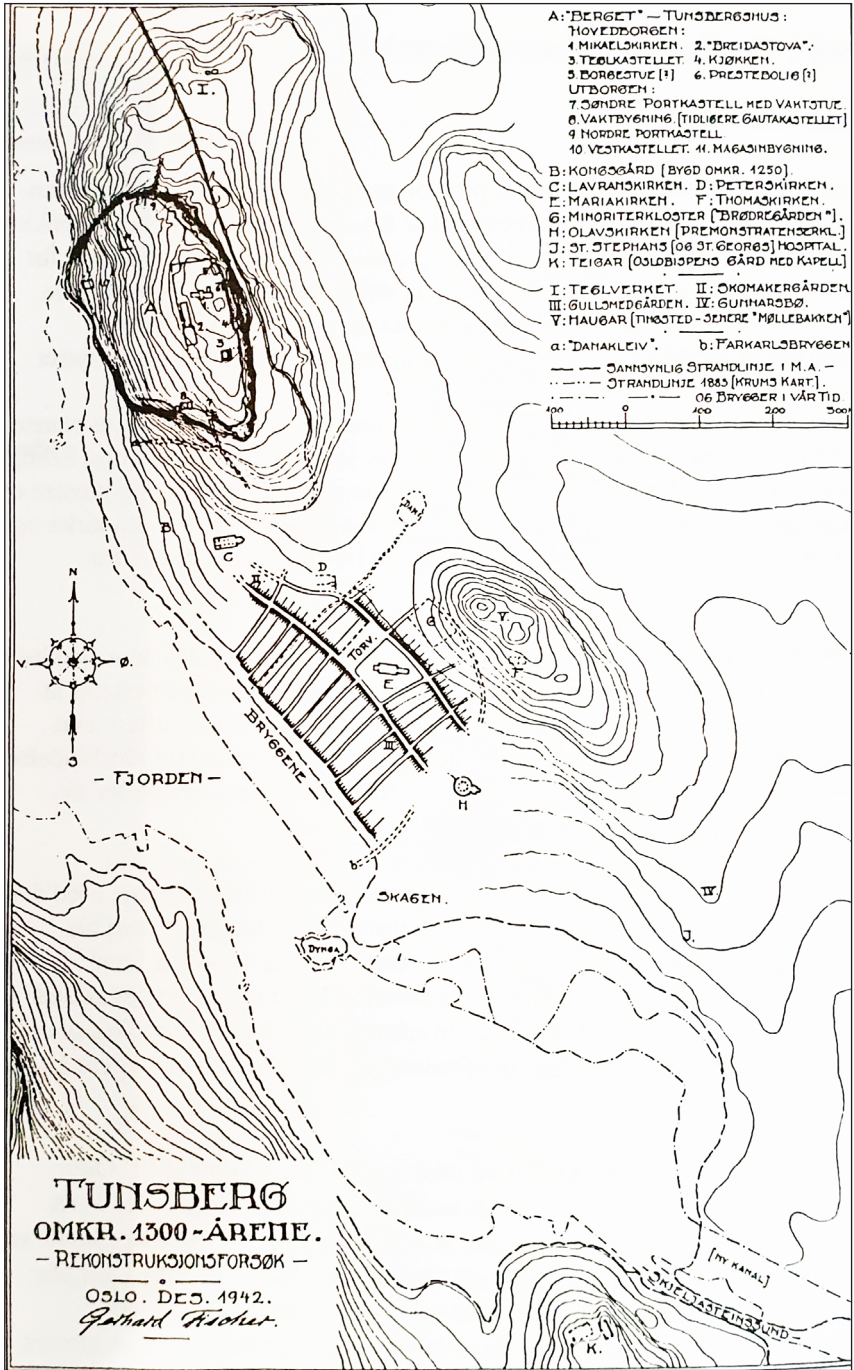


Figure 1. Tunsberg around 1300, reconstruction. Illustration: Gerhard Fischer.

Early excavations

The first excavation of St Olav's church in 1877–78 took place after the original site and remains of the church had been discovered when a new building was being planned. The western part of the original church had for the most part disappeared, but architect H. Thorsen was able to draw the ground plan, a section and other details (fig. 2a–c). He left his

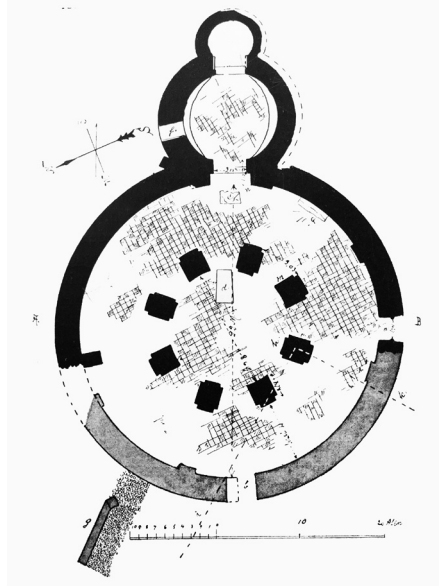


Figure 2a. Plan of the church and section through the church marked A–B. Illustration: H. Thorsen.

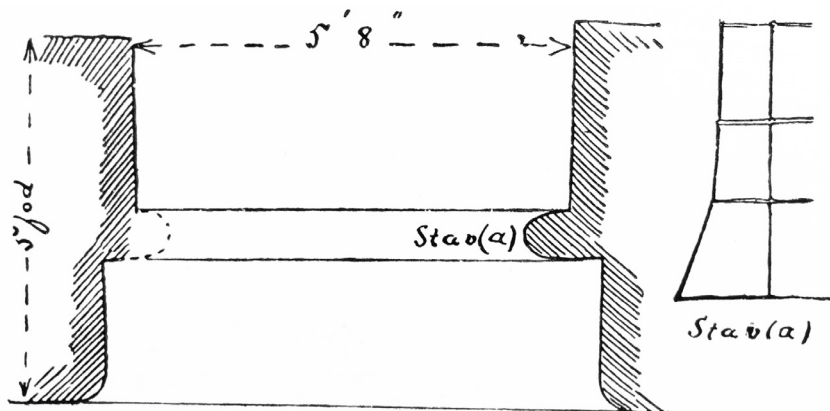


Figure 2b. Later destroyed south doorway marked B on the plan. Illustration: H. Thorsen.

documentation to Hugo Frölén who included it in his study ‘Nordic fortified round churches’ (in Swedish), published 1911. We can here see that he found floor-tiles, but also that he did not dig any deeper than that level. The section with an east-west orientation tells us what was left of the round building in 1878. The southwest doorway was later removed.

Further building work began on the site in 1928. Architect Gerhard Fischer conducted some smaller excavations to check the preservation of the ruins under the houses. The question of how to conserve the ruin was raised, but nothing happened for many years.

Tønsberg Sparebank (Tønsberg Savings Bank) bought the whole property in 1963 and made it possible to initiate a project for exposing the old church ruin, conserve it and carry out excavations (fig. 3). Bernt C. Lange from Riksantikvaren (Norwegian Directorate for Cultural Heritage), was responsible for the project, which lasted five years. His first step was to excavate the rubble from 1878, and he found what was left of the ruin. The rubble contained many original stones from the



Figure 3a. Exposure of the ruin under older buildings in 1964. Photo: Jan Greve/NTB.



Figure 3b. Visit by fellow students from Institute of Medieval Archaeology at Lund University 1970. Student Ø. Lunde at right. Photo: Tønsbergs Blad.

church that he could use in the restoration. He stopped excavating just above the old floor-level.

The walls in the nave were preserved more or less as before, but columns, doorways and the chancel had been more or less torn down. Enough of the original stones from the church remained, however, making it possible to reconstruct and conserve the ruin in 1967 as it is today.

The excavation of 1969–70

Locally, after the ruin had been brought to light and restored in 1967, there was a growing interest to know the history of St Olav's Church. I became responsible for the small research project in 1969–70, with some funding from Tønsberg Sparebank. However, this funding was insufficient for a large-scale project and the result was an old-fashioned, inexpensive excavation carried out by volunteers. The aim was to find out as much as possible of the building-process, later alterations, and dating. This implied that we looked for the original building level, later layers and floor-levels, connections between building elements such as nave, columns, chancel, vestry, altars, graves, doors, etc. It was also important to find out if the central room had had any special use. Students from Lund and Oslo participated, and we were helped by some interested local people.

In 1969 we excavated nine very small sections, and a report was written. After discussions at the Institute of Medieval Archaeology, Lund University, I supplemented the 1969 excavation with six small new trenches and extended two of the old trenches in 1970 (fig. 3b). We managed to finish that plan before other duties robbed me of the chance to continue, and no final report for this two-year excavation was ever written.

The archaeological result from the 1969–70 excavation

Nearly 20 smaller or larger sections were excavated (fig. 4). We usually excavated down to the familiar black culture layer (agricultural soil) over the sterile sandy deposits above the clay, or we stopped above foundations, other constructions, or graves. Following the Riksantikvaren's decision, we did not excavate the graves to their complete depth. We had to limit the area we excavated so as not to destroy too much.

In the following paragraphs, I will start from the lowest layer, the ground the church was built on, and comment on the stratigraphic situations above it and the different elements of the building.

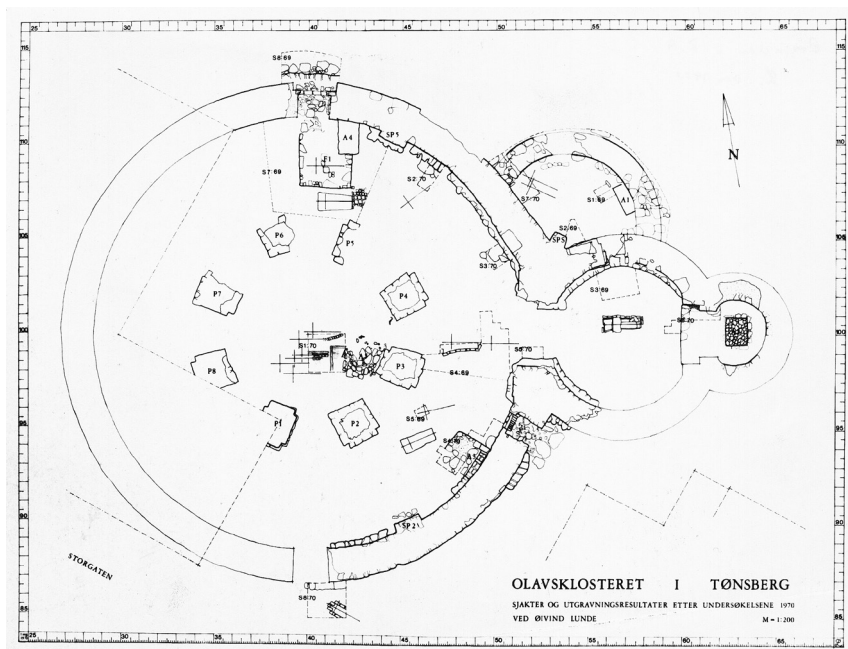


Figure 4. Trenches and archaeological remains, plan 1969–70. Illustration: Ø. Lunde.

The foundations and building level

The area on which the church was built was relatively flat agricultural land. The fatty black sandy layer did not contain any finds. The black layer is a bit higher in the northwest section where it disappears because of levelling for the floors.

We had this black layer nearly everywhere, and above it, in the southern and eastern sections, a building-layer without traces of bricks or datable finds (fig. 5a, b). In the northwest we had yellow-grey sand over the black layer. Above this level the layers are more complex and vary from place to place because of graves, constructions, and floor-repair (fig. 5c).

The church-plan

The round church has a round chancel with round apse and a round vestry (fig. 6):

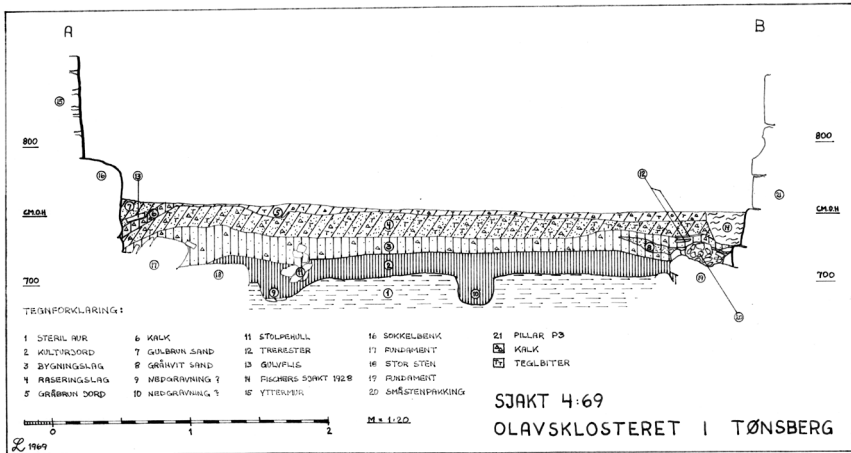


Figure 5a. Trench 4:69 between pier P3 right and the entrance to the Chancel left, facing south. Illustration: Ø. Lunde.



Figure 5b. Trench 4:69 between pier P3 right and the entrance to the Chancel left, facing south. Photo: Ø. Lunde.



Figure 5c. Trench S1:70, West of pier P3 with remains of an altar in the central room: Layers from bottom and up: 1) original ground, 2) black layer, agricultural soil, 3–4) building layer with sand, chalk, chips of red stone with a darker thin level on top before next layer, (5) not used here, 6) yellow sand, 7–8) darker level on top of 6 with red stonechips and dark earth on top with bits of wood. Probably a floor of wood above that later was removed. 10) yellow sand perhaps to fill up to the new floor level of glazed tiles. 13) Grey sandy soil. Photo: Ø. Lunde.

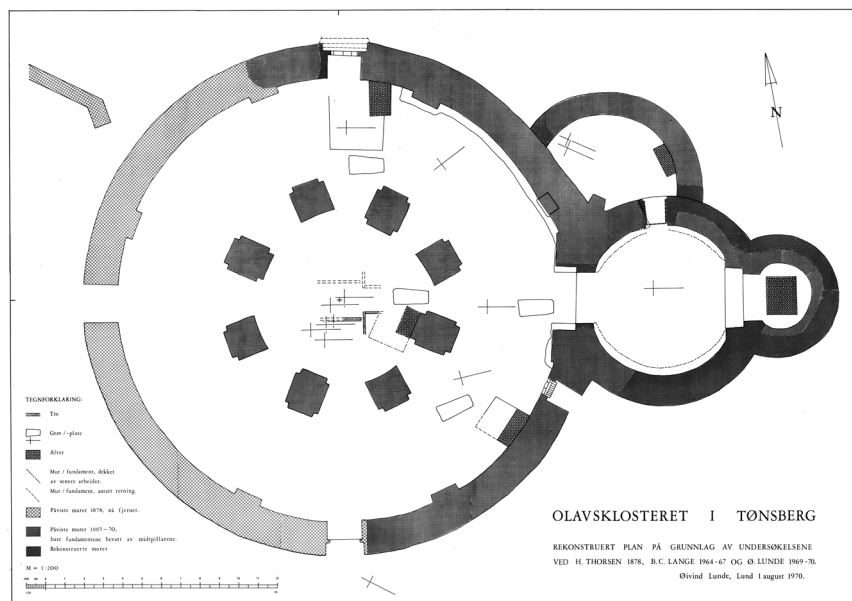


Figure 6. Reconstructed church plan. Illustration: Ø. Lunde.

- The roundhouse with diameter of 23m internally and nearly 27m externally. The central room with 8m in diameter with 8 square columns with pilasters and an ambulatory around it.
- The chancel has the same size as the central room and a smaller round apse in the east.
- The round vestry between the chancel and the roundhouse on the north side has the same diameter as the chancel.

The walls and traces of vaulting

The excavation revealed the following measurements of the walls:

- The roundhouse wall is 1,80m wide and built as a cavity wall of red local granite with rough-hewn square stones in relatively even layers.
- The northeast wall (fig. 7) and the lower southeast wall are relatively well preserved.
- The entrance to the chancel is restored, but the opening can be estimated to 3,5m.



Figure 7. Roundhouse wall in northeast from inside in the sacristy. Photo: Ø. Lunde.

- The walls in the chancel are 1,50m and the apse and the sacristy 1,20m.
- Part of the chancel walls has been restored from the foundations where traces on the stones gave the alignment. Original profile-stones that had finished the wall over the foundation were found and reused. (fig. 8a, b).

Just north of the entrance to the chancel a few meters of the wall have been rebuilt with smaller stones in a rough fashion and there are no traces of changes outside on the vestry-side. On top of the wall there is a large stone slab that is cut off at the front. In 1964 archaeologists found traces of plaster on this stone slab that gave the dimensions of a niche here (96cm wide and 58cm deep). Could there be a grave in the wall? If there is a grave in the stone wall, the most likely candidate would be King Erling Steinvegg ('Stonewall') who died in 1207.



Figure 8a. Apse from outside with the original profiled stones. Photo: Ø. Lunde/Riksantikvaren.

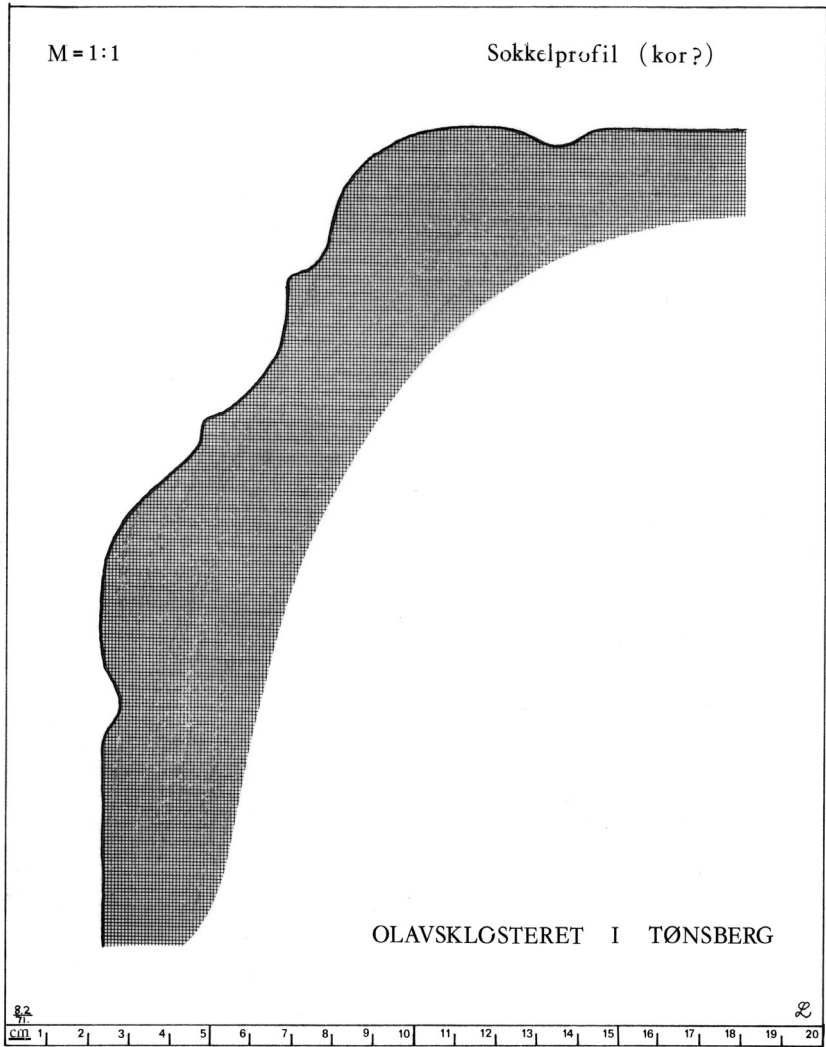


Figure 8b. Base profile around the apsis wall. Illustration: Ø. Lunde.

The eight square columns in the roundhouse are restored from the first course of stones that had survived demolition (fig. 9a). Most of the stones used in the restoration were found in the rubble. The profiled bases of the columns could be reconstructed with mostly original stones (fig. 9b).



Figure 9a. Eastern part of the roundhouse and entrance to the Chancel. Photo: Ø. Lunde.

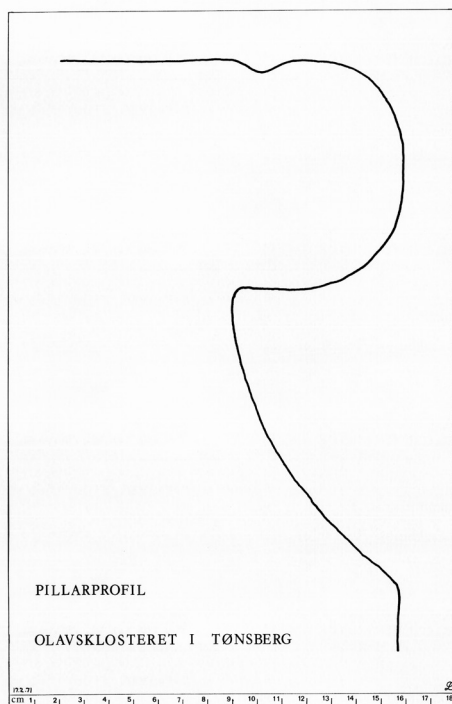


Figure 9b. Base profile used on the piers. Illustration: Ø. Lunde.

Every second column had pilasters on all four sides, while the other four columns only had pilasters on two sides which supported the arches between the columns. The columns with four pilasters supported arches over the central room and over to the outer wall in the ambulatory as well as the arches between the columns. At the outer round wall there are pilasters that would meet the arches in the ambulatory (fig. 10).

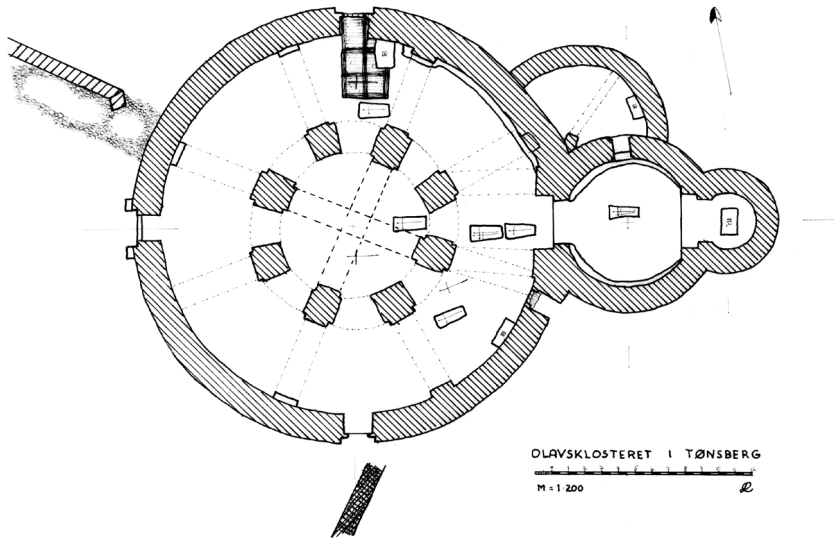


Figure 10. Church-plan with arches for the vaulting. Illustration: Ø. Lunde.

Two crossing arches could have been carrying a vault in the central room. In both 1878 and in 1970 parts of arches were found (fig. 11). The vaulting in the central room, chancel and vestry could have been part of the first phase of building, but it is difficult to prove this. Since molded bricks shaped to be part of a vault were found where they meet the walls, it is reasonable to suggest that the ambulatory has been vaulted at a later stage.

The arches between the central room and the outer wall, intended to lead the forces of weight, are probably from the first building phase. We know the vestry has been vaulted with one arch from the corner between the roundhouse and chancel and the outer wall (fig. 12). We have found parts of the arch there. This is the same construction as they found between two of the columns in 1878.



Figure 11. Part of vaulting found 1970. Photo: Ø. Lunde.



Figure 12. The vestry reconstructed 1970. Photo: Ø. Lunde.

Floors

Floor-tiles were used as the final flooring in the whole church. The floor was in a poor state with large areas needing repair and patches with different sizes of tiles could be seen.

In the roundhouse we had traces of an older wooden floor under the final one. This floor must have been a kind of 'floating floor' with joists under the floor planks, at least in the southeast and east (fig. 5). The planks were mostly removed when they laid the final floor of glazed tiles. The tile-floor was on nearly the same level as the earlier wooden one. The space between the two floors had been filled up with sand and building-rubble: bits of stone, bricks and chalk.

There is one step up from the roundhouse to the chancel where there is a partial floor of thin stone slabs under the later floor-tiles. From the chancel there is one step up to the apse and we could see the flat stone slab floor. The same kind of floor is also in the vestry.

Doorways

Only the northern and southern doorways in the round church are documented. The southern doorway, destroyed after 1878, was very similar to the northern one. The northern doorway has survived, but it must have been blocked relatively early since the threshold is hardly used. However, the fact that there are no traces of any blocking could indicate that this door had rarely been in use. There was probably, in the late medieval period, an altar near the doorway with a platform in front of the doorway (fig. 13a). There are remains of the old wooden floor under yellow sand at the sides of this platform and over the final tile-floor. In this final floor there is a marble slab with a kind of lily cross (fig. 13b).

The third opening in the southeast next to the chancel is a simpler doorway that must have been the entrance from the monastery. It is important to note that the door opened out of the church and the door could be bolted from the outside, that is from the monastery (fig. 6 and fig. 9a). This doorway has been rebuilt several times and could have been in use after the medieval period.

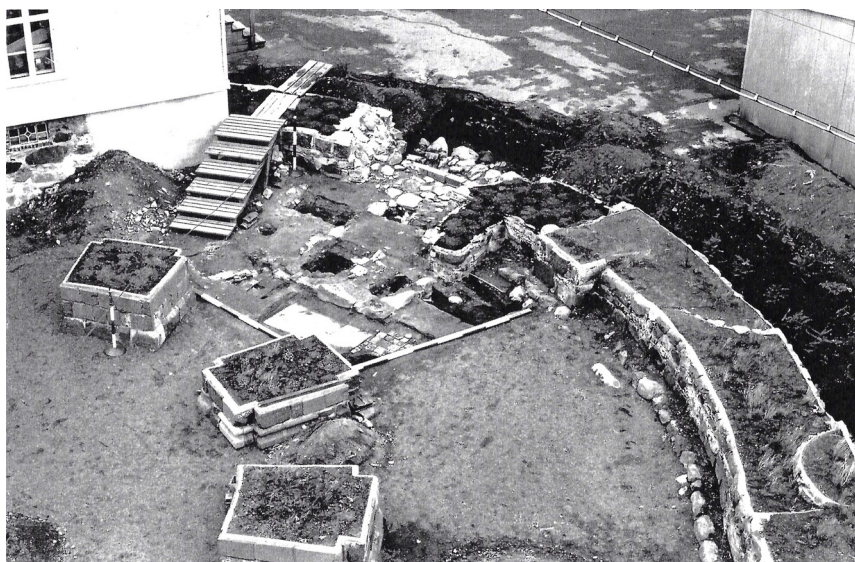


Figure 13a. North doorway and the ambulatory with tile-floor, grave slab and platform with altar.
Photo: Ø. Lunde.



Figure 13b. Detail of 13a with the grave slab with a kind of lily cross and the last glazed tile-floor.
Photo: Ø. Lunde.

From the chancel we have traces of two doorways to the vestry above each other. They correspond with the two floor levels here (fig. 12). We found no traces of any other doorway to the vestry.

Thorsen indicated in 1878 a doorway in the west, but he probably had not seen it himself and he did not comment on it in his notes. However, it is possible he simply received information about this doorway, and that it had been demolished just before he arrived. Still, we cannot be sure about the existence of the western doorway, but it would have been strange not to find a doorway here facing the Main Street to the west.

Altars

Remains of altar foundations were found in five places in the church, but there could have been others where the walls were never recorded (fig. 6).

The main altar in the apse has a very elaborate construction (fig. 14a). It is made as a small chamber with well-made sides filled with mostly



Figure 14a. Main altar in the apse after excavation. Photo: Ø. Lunde.



Figure 14b. Main altar in the apse from northwest during excavation. The water washed stones between the chamber's walls and the apse wall comes from the chamber. Under the stones it was a layer of lime over big lumps of iron slag set on a layer of gravel and more lime on soil, gravel and chips from stones cutting over the foundation stones for the apse. Photo: Ø. Lunde.

water washed stones (fig. 14b). Under it was a layer of lime over big lumps of iron slag on a layer of gravel and more lime. Then, over the foundation stones for the apse, lay soil, gravel, and chips and fragments from stone-cutting.

Other altars are to be found in the vestry, in the ambulatory near the doorway to the monastery, just east of the north doorway and in the central room at the column opposite the monastery door.

Finds of coins suggest the late medieval period for the platform and altar at the north doorway (fig. 10).

We have coins and other finds from later periods, but nothing that can help us with the dating of the earlier periods.

There is also a problem in that the finds from the excavation in 1970 have been regarded as lost for many years. The finds were brought to the County Museum in Tønsberg and later, in 2009, sent to The Museum of Cultural History in Oslo, but never properly studied.

Graves

Burials have been found in nearly all the small trenches (fig. 6). Five of the graves have grave slabs of marble from the thirteenth and fourteenth centuries. Many of the graves were constructed of brick, and one contained a coin from around 1280.

The central room

In the central room, small bits of copper and copperplates were found both in 1878 and in the 1969–70 excavation (fig. 4). One of the important goals of this later excavation was to get some idea of how this part of the church was used. There is no evidence to be found in the first phase with the wooden-floor, but in the last phase we have clear evidence that there must have been a wooden construction set in the tile-floor. This construction can be located to the eastern and central part of the room, and it could have been covered with copper. We could only guess as to what it was and what it looked like.

A canopy?

The old altar at the column (P₃) could still be used in connection with this new construction. 7–8 burials were found under this construction in the tile-floor. In one of the graves was a coin, which could be dated to the late fourteenth century. This or a similar construction could very well have been placed on the old wooden floor.

Rebuilding

No major rebuilding has been observed, except for the final tile-floor with yellow, green, and brown glazed tiles. This floor was in bad condition and has been repaired; it is possible it has been there a long time. We have no finds that can help give a more exact date other than the general date of thirteenth to fifteenth centuries. Many moulded bricks were found during the earlier excavations and these bricks indicate a later vaulting of the ambulatory. It is possible that the vaulting was done at the same time

that the tiled floor was laid. This could explain the thick building layer everywhere in the church. Alterations to the doorways could then have been necessary as well. Moulded bricks with elaborated profiles can be linked to doorways or windows that would fit in the same period.

Sequences and dating

It seems very likely that the round church had two main building periods. During the first period the church could have been built in one process in the local red granite-stone. The arches would have been built at this time, and probably the vaulting in the central room, in the chancel, apse and vestry.

During the second period bricks were used, tiled floors were laid, the ambulatory was vaulted, and changes were made to the doorways and to other places where bricks could be used.

There are no traces of bricks being used in the first period. This means the old building must pre-date the start of brick-production in Tønsberg – which occurred in the thirteenth century.

Church and monastery

In 1970 we had a small trench on the south side of the church near the southern doorway (fig. 6). We found a grave in a brick coffin and foundations for a wall going southwest. On the other side of the main street, Storgaten, some remains of the monastery buildings were found in 1971. In association with the building of the new library, in 1987 and 1991 more substantial remains were found.

One of the leaders of the excavation, Dan Petterson, made a reconstruction of the remains of the monastery south of the church. This reconstruction includes the area north of the church, and it suggests that there was a graveyard there (fig. 15).

It is difficult to understand how the buildings were organized within the monastery that probably owned the ground further south and southwest to the fjord. The reconstruction shows a long building leading from the church to the remains of walls a bit further south.

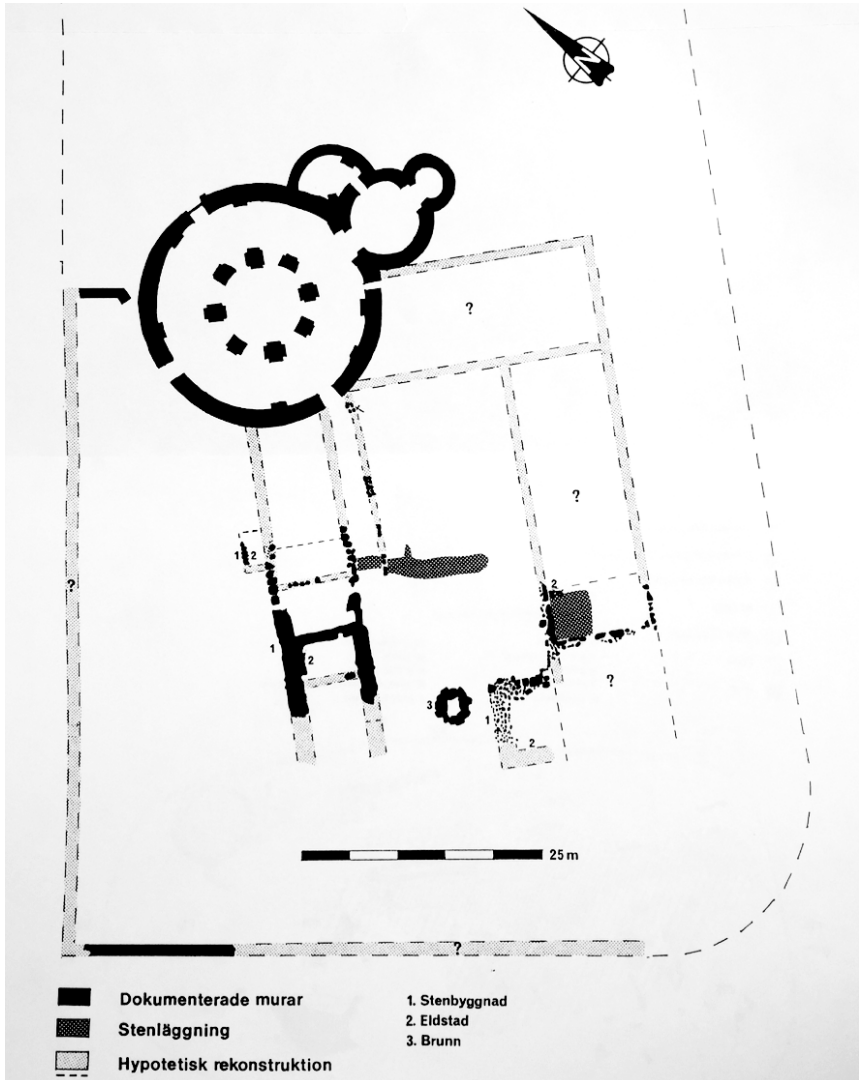


Figure 15. Plan of the church with remains of the monastery at the south side of the church. Remains can be seen in the library. Illustration: Dan Petterson.

What this reconstruction shows could be the west-wing of the monastery. East of these remains, there is a well and remains of walls and floors.

Petterson suggests that the cloister is near the church, and he reconstructed a north wing at the roundhouse between the south doorway and the southeastern doorway next to the chancel. He links this northern

building by the church walls with an eastern wing running down to the wall-remains further south. Since hardly any remains were found to support this suggestion, it is not possible comment on its validity. However, it would give meaning to the eastern doorway being an exclusive entrance for the canons between their private quarters and the east end of the church. The excavation of the monastery gave only a more general date to the thirteenth century.

In conclusion, we have no certain archaeological evidence to date the church before the burial of King Erling Steinvegg in 1207, but the architecture suggests that the church is definitely older.

Concluding remarks

Hugo Frölén said in 1911 that St Olav's Church is the most typical three-circle church he knows of in the Romanesque tradition of central buildings. He would probably have known about the round vestry as well. It is difficult to see how this extraordinary planned round church could be part of building traditions for monasteries.

I understand that it is very convenient to think that the church has its own, older history before it became part of a monastery. It could be so – I have believed it to be so a long time, but I am not so sure any longer.

I could go on referring to historic and art historic evidence and theories, but the main aim of this presentation was to make the results of this fifty-year-old excavation more readily available. I hope the short presentation of the archaeological evidence can be useful for future research.

However, since the excavation was planned for a doctoral thesis at the University in Lund, I will finish by mentioning some circumstances we found interesting during discussions in 1970 at the seminar for students in medieval archaeology:

- The Premonstratensians had no rules for how to organize the buildings in the monastery. They usually followed Cistercian traditions.
- The Paschal Mystery was their most important rite since the founder Norbert of Xanten's vision around 1120. In that context a round church could be an interesting choice.

- After 1140–50 Premontr  rarely took any direct initiative in establishing new daughter houses. Only through their own first daughter-houses. There is some circumstantial evidence suggesting that Premontr  could have had a personal interest in T nsberg, and that this might have led to the church and monastery there being established relatively early.
- Archbishop Eskild of Lund (1138–79) was responsible for establishing five or six of eight new Premonstratensian monasteries in Denmark before 1155. He was also archbishop of Norway up to 1153 (when the archbishopric of Nidaros was established), so he could easily have influenced an establishment in T nsberg.

Works cited

- Fr l n, Hugo F. 1910–11. *Nordens bef sta rundkyrkor: En konst- och kulturhistorisk unders kning med 270 bilder*, vol. I–II. Stockholm: Lars Fr l n.
- Lunde,  ivind. 1971. ‘Premonstratenserklosteret i T nsberg: St. Olavs kirke – Nordens st rste rundkirke.’ *Vestfoldminne: By og Borger*: 68–85.
- Lunde,  ivind. 1993. ‘Premonstratensernes kloster i T nsberg – kirken og klosteranlegget.’ In *Seminaret ‘Kloster og by’ 11.–13. november 1992: Omkring Olavsklosteret, premonstratenserordenen og klostervesenet i middelalderen*, eds. Jan E. G. Eriksson & Kari Schei. Tverrfaglige seminarer i T nsberg, rapport nr. 1. T nsberg: T nsberg bibliotek & Riksantikvaren, pp. 9–22.
- Petterson, Dan. 1991. *De arkeologiske unders kelsene i Storgaten 16, T nsberg 1991*. Arkeologiske rapporter fra T nsberg No. 7. Oslo: Riksantikvaren: Utgravningskontoret for T nsberg 1991.