

Guidelines for constructing/thatching a turf roof

When our ancestors turf-thatched a roof, the sods were laid upon a five-layered birch bark foundation. The unevenness of the birch bark hindered the sods sliding or migrating downwards. It is maintained each layer of bark has a lifespan of approximately ten years. Therefore, a turf-thatched roof would last app. fifty years without requiring any large-scale repairs or maintenance. Today birch bark has been replaced with roofing felt and knobbed plastic sheeting - one reason being the high cost of birch bark. Approximately eight square metres of bark are required for a single layer for every twenty metres of eaves.

From around 1920 to 1970, it was normal practise to use tarred roofing felt as a base, laid in the same manner as bark, e.g. cut into over lapping sections and laid bonded. Today this type of roofing felt is no longer available.

The “old type” of roofing felt was well suited as a base. Grassroots attached themselves firmly to the felt without penetrating any further. Trials with the new type of asphalt felt, laid in the same manner, have not proved to be as effective as the tarred felt.

Using just the new type of asphalt felt as a base, grassroots have a tendency to penetrate the felt, growing into the house loft and may lead to the roof leaking. This is the sole reason for using the aforementioned knobbed plastic sheeting on top of the felt.

As an additional precautionary measure to prevent turf sods from disintegrating and migrating downwards, discarded trawl netting is laid on top of the knobbed plastic sheeting.

If houses are not intended for a residence or a working environment, but solely for restoration purposes, according to the ancient manner, birch bark is used sparingly as it is expensive to acquisition. The roof is constructed in such a manner that bark is only used where the roof base becomes visible, e.g.: when roofing rafters or laths are spaced, bark is laid in strips lengthwise along the laths and also to protrude from the eaves towards the drainpipe. Knobbed plastic sheeting and trawl netting are subsequently laid on the roof. If bargeboard-locking pins penetrate the gable, knobbed plastic sheeting is laid on top of that section fastened to the roof.

1. After the roof has been covered in felt, knobbed plastic sheeting (in one metre broad sheets) is laid. Begin from the eaves and work upwards. The bottom most layer does not have to exceed a width of 50 cm. (app. half a felt roll width) and is festooned by nails in the upper edge. The lower edge is turned down under the rainwater board and nailed to its downward edge with roofing nails – see fig. 1 and 2.
2. The eaves: 3 layers of birch bark, with its inward or white side facing up, are nailed with roofing nails at their upper edge. The bark is bent upwards and festooned to the bargeboard along the gable – see fig. 3, 4 and 5.
3. The iron sod retainers are fastened.
4. The turf-board (a board mounted at the lowest edge of the roof on its side to prevent sods from sliding off the roof) is made. The lower edge is cut at a slant in such a manner that the turf-board slant corresponds to the overall slant or pitch of the roof and the angle of the iron sod retainers. Thereafter frost holes are cut. In order to position these appropriately in relation to the iron sod retainers, the turf-board is mounted and the frost hole positions marked off – see fig. 6 and 7.
5. The second layer of knobbed plastic sheeting is laid on top firmly up against the turf-board and its upper edge nailed down. On top of the knobbed sheeting, trawl netting is laid; also in one metre broad strips, corresponding to the knobbed sheeting, this is also nailed down on its upper edge. knobbed sheeting and trawl netting must overlap with a margin of at least 25 cm. to prevent water from creeping up over the joining section – see fig. 8.
6. When nearing the ridge of the roof a section of knobbed sheeting is laid lengthwise along the ridge covering both sides, this is not nailed down. Trawl netting is also laid on top lengthwise, and tied to the netting on each side – see fig. 9.
7. The manner in which turf sods are cut can vary from person to person. One method is depicted in figures 10, 11 12 and 13. First, a suitable area is determined from where to cut the turf. The grass is then cut and the area fertilised and limed app. 14 days before the actual turf cutting takes place. The turf is cut into app. 40 cm. long, 12 cm. to 15 cm. broad and 15 cm. high sods, which corresponds to app. the depth of a spade blade.
8. The sods are placed beginning at the lower roof edge, and laid upwards to the roof ridge, thus the sods are trampled together at the same time as the person laying the sods is provided with a solid footing. The sods are laid up against the turf-board in such a manner the width of the sods corresponds to the thickness of the laid turf. The first row of sods are cut to achieve the best attainable even foundation and to evenly distribute pressure upon the turf-

board. As the sequential turf rows are laid, bonded, they are trampled together – see fig. 14 and 15.

9. It is especially important the whole roof is thoroughly sprinkled and doused with water, from its completion date and until grass growth is well established. In the event of a drought, it may be necessary to thoroughly douse the roof twice daily.

On behalf of Føroya Fornminnisavn,
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Rev A: Overlap of the knobbed sheeting changed to 25 cm. TW 20080530



Fig. 1. Knobbed plastic sheeting being laid.



Fig. 2. At the bottom edge, the knobbed plastic sheeting is turned down under the rainwater board and securely festooned with roofing nails.



Fig. 3 Birch bark bent upward and festooned to the gable bargeboard.



Fig. 4. Eaves; 3 layers of bark with its inward side, e.g. the white side facing up.



Fig. 5. Bark being fastened with roofing nails on its upper edge.



Fig. 6. The turf retainer board with frost holes under the final stages of construction.

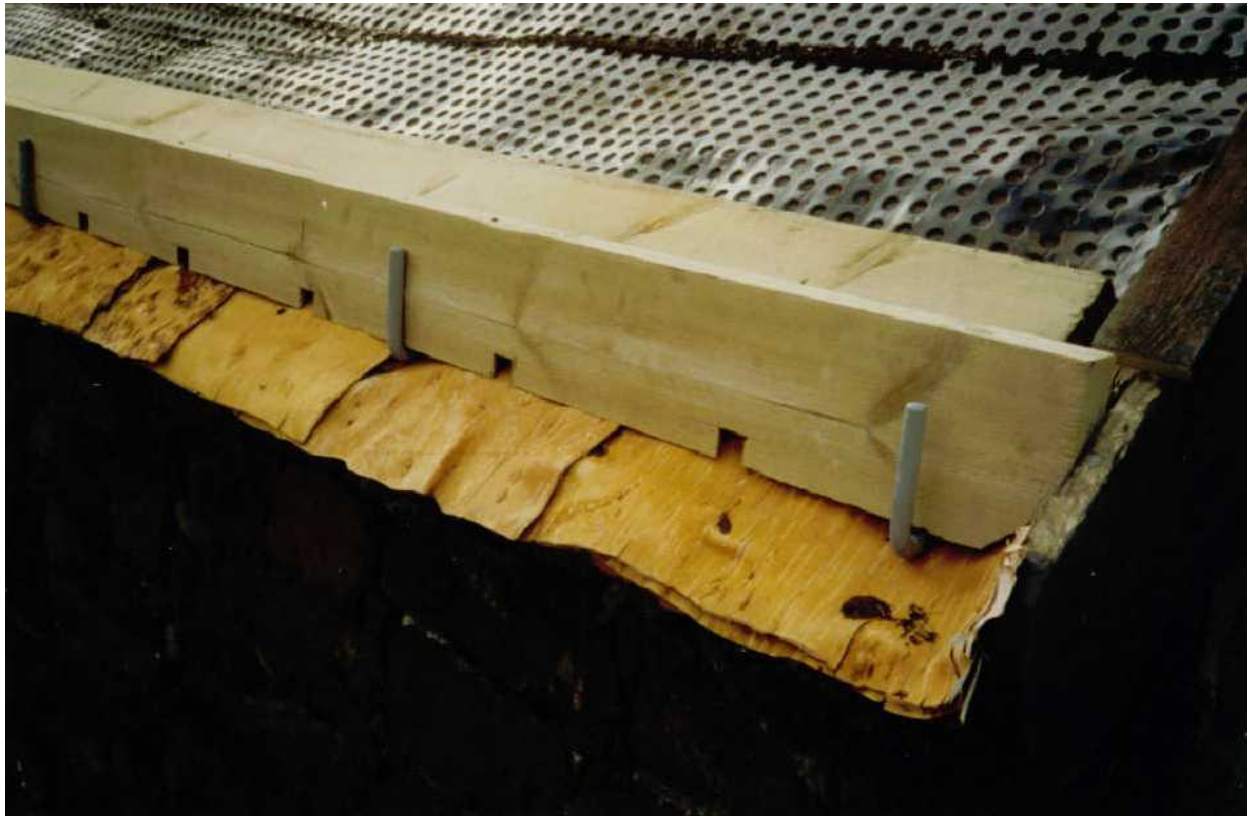


Fig. 7. The turf retainer board in place.



Fig. 8. Knobbed plastic sheeting and trawl netting in equally broad sheets being laid. Both are festooned at their upper edges, with a 20cm. joining overlap margin.



Fig. 9. Trawl netting is laid lengthwise along the ridge and securely tied to each side-netting section.



Fig. 10. The grass is cut and fertilised app. 14 days prior to the actual removal procedure.



Fig. 11. The sods are cut app. 40 cm. long and 12 to 15 cm. broad.



Fig. 12.



Fig. 13. The sods are app. 15 cm high, or app. the depth of a spade blade.



Fig. 14. The sods are laid so the width roughly corresponds to the thickness of the sod.



Fig. 15. The sods are laid bonded from the eaves upwards to the ridge. As the rows are completed, they are trampled firmly together.

The photographs no. 1-15 were taken in connection with a repair to the thatched roof of the old fort in Torshavn (Skansahúsinum) in 1993. In order not to misunderstand these guidelines, e.g. how knobbed plastic sheeting should be laid, etc. the photographs no. 1-15 were taken of a roof, which had knobbed plastic sheeting laid previously.

Photographs no. 16-20 were taken in connection with a new reconstruction of the roof of the hay barn at Hoyvík. These depict among other aspects, how the bark is nailed to cover the space between the rafters or laths.



Fig. 16. It is most aesthetically pleasing to the eye, if the distance between the frost holes correspond to the turf retainer irons.



Fig. 17. The locking pins for holding the gable bargeboards can be an integrated part of the roof construction as depicted, or separately festooned on to the roof laths.



Fig. 18. A double layer of sods are laid upon the roof ridge.



Fig. 19. The roof, birch bark, knobbed plastic sheeting, trawl-netting and lastly the turf.



Fig. 20. Bark is only used where the base becomes visible, e.g. where the rafters or laths are spaced. The bark is laid on top of the laths in strips lengthwise along the eaves and protruding towards the drainpipe.