AN INTRODUCTION TO THE CAITHNESS FLAGSTONE INDUSTRY

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BACKGROUND

The fact that much of the rock which underlies Caithness possesses the curious property of readily splitting into thin large slices (or flags) [Fig. 7.1] has been known for many hundreds, if not thousands, of years, although it has only been exploited commercially since the early years of the 19th century. Archaeological excavation at Skara Brae in Orkney, where similar stone is found, has shown that even as far back as 4500 B.C. thin slices of stone were used for building construction and making furniture. Flagstone was doubtless also used by the early inhabitants of Caithness for building houses and stone walls, the material obtained at outcrops where the rock broke through to the surface and required little or no quarrying.

This flagstone was formed initially as layers of sediment in the bed of a great lake (called Lake Orcadie by geologists) which covered a large area of the north of Scotland some 370 million years ago. Succesive periods of laying down of sediment and the long dry spells gave the stone its laminated structure which makes it split so readily into flags. The great weight of overlying layers of rock compacted the sediment and made the flags dense, hard and durable.

COMMERCIAL EXPLOITATION

The first attempt to obtain the stone on a commercial basis was made at Castlehill, on the shore of Dunnet Bay to the north of the village then known as Olrig, when, in the summer of 1793 several cargoes of stone were shipped to Aberdeen. The instigator of this new industry was James Traill who lived from 1758 till 1843 and was for a time Sheriff of the County. He moved from Rattar to Castlehill House in 1824 and set about organising the flagstone quarrying. In the following year, regular shipments of flags were begun to ports all over the United Kingdom and as the fame of this most useful material spread, cargoes were sent as far afield as Europe, North and South America. Indeed, a famous meat factory in the Argentine was floored with Caithness flags. The high wear resistance was highly prized and made the stone especially useful for pavements and courtyards - for example, the Strand and London Docks were paved, and the concourse of Euston Station in London laid, with flags. 'In addition to its great strength and durability', ran an early sales brochure, 'the stone is generally so close in grain as to be impervious to moisture. It resists the action of severe frost and it does not scale or become slippery'.





Fig. 7.2. Flagstone quarries in the Thurso area.

Fig. 7.1. Slices or flags extracted from the working quarry at Spittal, mid 1970s.



Fig. 7.3. Flagstone production, in Caithness, 1858-1911.

Traill enlarged the harbour at Castlehill [c.f. Fig. 9.5] and laid a bogie track to the nearby quarries, whilst in Castletown the population doubled within 15 years. Some of the original quarry workers' houses survive yet on the north side of the main street, in front of spoil tips of stone rubble. As the industry prospered other proprietors took up the trade and quarries were opened at Weydale, Janetstown, Achscrabster, Holborn Head and Spittal [Fig. 7.2], and in the year 1899, 23,000 tons were produced. This was bettered, however, in 1902, when output rose to 35,000 tons [Fig. 7.3]. When operations were at their height over 1,000 men were in employment in an industry which ranked second only to the Aberdeen granite output in terms of annual tonnage. Wages were poor and the work dangerous: in 1866 there was a strike for more money which resulted in the workers being paid by the square foot.

By the 1914-18 War, output had fallen to about 5,000 tons per year. And after the War, with the increased cost of transport and higher wages, the industry fell into decline. In the 1920s most of the quarries closed down when synthetic stone — concrete pavements and paving blocks — was introduced into the towns. By 1939, the cost of flag in Edinburgh was 12/6d per square yard as against 4/6d for a non-slip concrete paving block of the same size. In some 150 years, therefore, the industry had turned almost full circle, back to a limited domestic use for paving and fencing.

Fig. 7.4. Spittal quarry, reopened in 1949, in the mid 1970s.



In 1949 Spittal Quarry [Fig. 7.4] was reopened and good quality, almost black, cut and polished flagstone became available once again. This time, however, the cutting and polishing was done by a more sophisticated method employing diamond cutters and burrs. The flags produced were used in some of the new buildings in Thurso and at Dounreay; they also served as coffee table tops, stones for fireplace hearths and mantel-pieces — polished and oiled to a fine charcoal-grey. Achanarras Quarry was also reopened, providing reddish-grey or rust stone blocks for fire-places, facings for new buildings and a few fine roofing slates. Thus the revived industry continues on a small scale at Spittal [Fig. 7.5] and at Plocan near Calder where small roofing flags are being produced for the reconstruction of historic houses in Kirkwall and Stromness.

EXTRACTION AND DRESSING

Inevitably mechanisation and new techniques have played an increasing role in the quarrying and dressing of flagstones. Some work is still carried out by hand at Spittal and Achanarras, notably the careful placing and driving of the wedges used to separate the thicknesses of the stone [Figs. 7.6; 7.7].

In earlier days, the raw blocks were cut into squares and rectangles with heavy iron hand-saws, using rough sand as an abrasive. Successively, water power was replaced by steam engines and electricity. As cutting, so polishing is now carried out with diamond saws and burrs [Fig. 7.8].

Fig. 7.5. Dressed slates at Spittal - to be used at Arbroath Abbey.





Fig. 7.6. Inserting the wedges to split off a layer of flagstone pavement. Spittal, mid 1970s.









Some quarries, Spittal and Achscrabster, traditionally cut their own flagstone. Specialist stone dressing yards however developed from about 1837 to service most other quarries. These yards were concentrated on both sides of the river mouth at Thurso [Fig. 7.9], and bogie tracks laid direct from quarries such as Weydale to Thurso East to ease the movement of the stone. By 1900 there were three large yards at the mouth of the Thurso River, on the site of the present harbour and brickworks.

Inevitably most of the dressed stone was shipped from Thurso [Fig. 7.10], Scrabster and Castlehill, though a certain amount also went through Wick. Whilst the flags were sometimes the main cargo they also often served as ballast in returning colliers.

LOCAL USE

Over the past 150 to 200 years, partly as a spin-off from commercial exploitation, use of flagstone has featured strongly in the lives of ordinary Caithness farmers and fishermen. Its importance is still very much in evidence in town, village and countryside over most of the district [Figs. 7.11 - 7.19].



Fig. 7.9. A Thurso flagstone works for cutting and dressing the flags. Early 20th century postcard.

Fig. 7.10. Vessels loading at the Thurso quays of the Caithness Pavement Quarries Ltd. Early 20th century postcard.





Fig. 7.11. A flagstone dyke, heightened by use of post and wire. 1969.

The countless miles of flagstones, set vertically in the ground and generally overlapping, will stand far longer than any post and wire fence; whilst as a material for building it is in no way limited merely to those relatively small angular blocks that - in comparison, say, to rounded beach boulders — made house-building in Caithness so straightforward. Walls, both exterior and interior, could equally be made from huge flags 3, 4 or up to some 8ft (1m - 2.5m) high by some 3ft (1m) wide. Roofs might be covered in a variety of smaller slate sizes or, again, by large rectangular flags laid in differing patterns of overlap. Thatched roofs were often flagged for one course immediately above the wall-head — itself topped with flagstone - and then covered with divots and thatch: the thatch could be weighted with pieces of broken flagstone, and skylights cut out of a flagstone insert. Inside, fireplaces had a massive breast-stone of flagstone, sometimes also flagstone slabs as fire-backs; floors were frequently laid with flags and single lengths provided cupboards, shelves, benches, window and door lintels. Byre stall divisions were similarly provided for, and gate posts around the steadings and fields. And it is hardly surprising that the flagstone harbour of Castlehill displays such a high level of skill in the use of flagstone. There are many other similar uses.



Fig. 7.12. The harr-hung smiddy-made gate swings on a flagstone gate-post. 1969.

Fig. 7.13. At Middlegarth near Castletown, 1969 - flagstone walls and slate roof.





Fig. 7.14. A massive internal dividing wall of flagstone. Near Castletown, 1969. *Fig. 7.15.* A flag-roofed pig sty, with stone door lintel. Hunspow, near Dunnet, 1979. An upright flagstone provides some shelter at the entrance.





Fig. 7.16. The breast-stone above the fireplace. Hunspow, near Dunnet, 1969. The iron swey swivelled on a block of stone at the foot.

Fig. 7.17. The water-bink just outside the house door at West Dunnet, 1969. The water barrel used to stand on the left.





Fig. 7.18. The ruinous farm of Achnacly, near Brubster, 1969. In the long byre there is a flagstone door lintel, flagstone wall head and a flagstone first course underneath the thatch. The *benlin* stones weighting down the thatch are of flagstone, and rooflights have been cut out of slabs of flagstone.

Fig. 7.19. Inside the Achnacly byre the stall divisions or *hallans* are all made from rough-cut flagstone. Note the flagstone wall-plates on the top of the walls, the line of flags up from the wall-head laid along the couples, and the flagstone roof-lights. 1969.





Fig. 7.20. Belgian trawler aground on the gently sloping slabs beyond Thurso East. 1969.

The former importance of flagstone to Caithness life, both domestic and commercial, cannot be overestimated — though where it outcropped from the coast it could also ensnare the unwary mariner!

Acknowledgement

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