

Mostert's Mill - An Eighteenth Century Cape Windmill

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In 1796, a year after the British had taken over control of the Cape from the Dutch, Gysbert van Reenen, the owner of the extensive farm Welgelegen in the Liesbeek valley, built a small tower windmill on his estate. Nearby he constructed a large circular threshing floor (trapvloer) where his wheat was taken to the windmill for grinding.¹

Gysbert van Reenen died in 1827 and Welgelegen passed into the hands of his son-in-law, Sybrand Jacobus Mostert, after whom the windmill was later named. How long the mill continued to operate is not known but in 1873, after the death of Sybrand Mostert, a valuation of the various buildings of the estate included 'a windmill' (Mostert's Mill) which was valued at only £50.

It seems likely that it had fallen into disrepair by that time either through damage by a storm or because meal could be obtained more conveniently from other sources and Mostert concentrated on his more profitable vineyards.

Eighteenth Century Cape Windmills

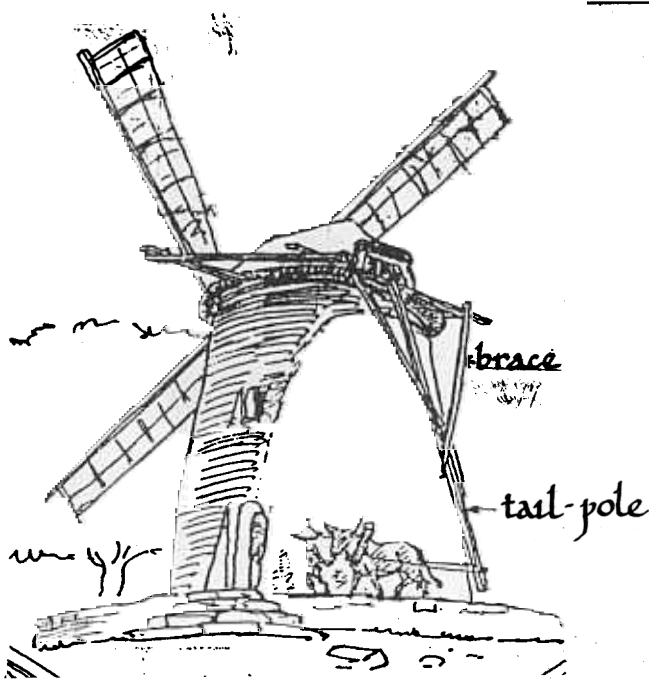
In October 1934 the Public Works Department carried

out a survey of the mill and produced a detailed measured drawing of the remains. On this drawing the surveyor added a sketch showing a reconstruction of the external features of the mill, mainly the sails and the tail-pole.

In order to operate a windmill, the cape, with its sails, was 'winded', that is, turned into the most favourable position to take advantage of the prevailing wind. In many north European countries and in the Cape until the early nineteenth century this was accomplished by means of a long, stout tail-pole attached to the cap to which it was further secured by a pair, or two pairs, of braces. The sketch of Mostert's Mill shows only one pair of braces. A drawing by Thomas Bowler in 1862 of Clapperton's Mill on Camp Ground, which was built before 1873, shows only one pair of braces² and so does Sir Charles D'Olyly's drawing of the Onderneming windmill made in 1833³, but some Cape windmills, such as one of the Salt River mills painted by Solomon Caesar Malan in 1839⁴, had two pairs of braces (a pair of long braces and a pair of short braces). The miller pushed the end of the tail-pole to turn the cap into the desired position. According to the Public Works Department sketch 'winding' the cap of Mostert's Mill was achieved by yoking an ox to the end of the tail-pole and so pulling the cap round.

Early Nineteenth Century Development of Cape Windmills

During the first half of the nineteenth century several larger windmills were erected at the Cape. These all followed English patterns and employed the inventions of English millwrights, particularly with regard to methods of 'winding' the cap. The most favoured method was that devised by Edmund Lee in 1745, who fitted a fantail to the cap. The fantail was linked to a toothed rack on the top of the mill wall. When the direction of the wind changed, the fantail slowly turned and the mill cap moved round, so continuously keeping the sails in the most favourable position in relation to the prevailing wind. Such fantails were fitted to the windmill built by Thomas Sutherland on Upper Orange Street



Sketch of Mostert's Mill on a measured drawing of the windmill made by the Public Works Department, showing the cap being "winded" by an ox yoked to the end of the tail-pole. Source : Drawings by Public Works Department, No. 10184-1 of 23 October 1934.

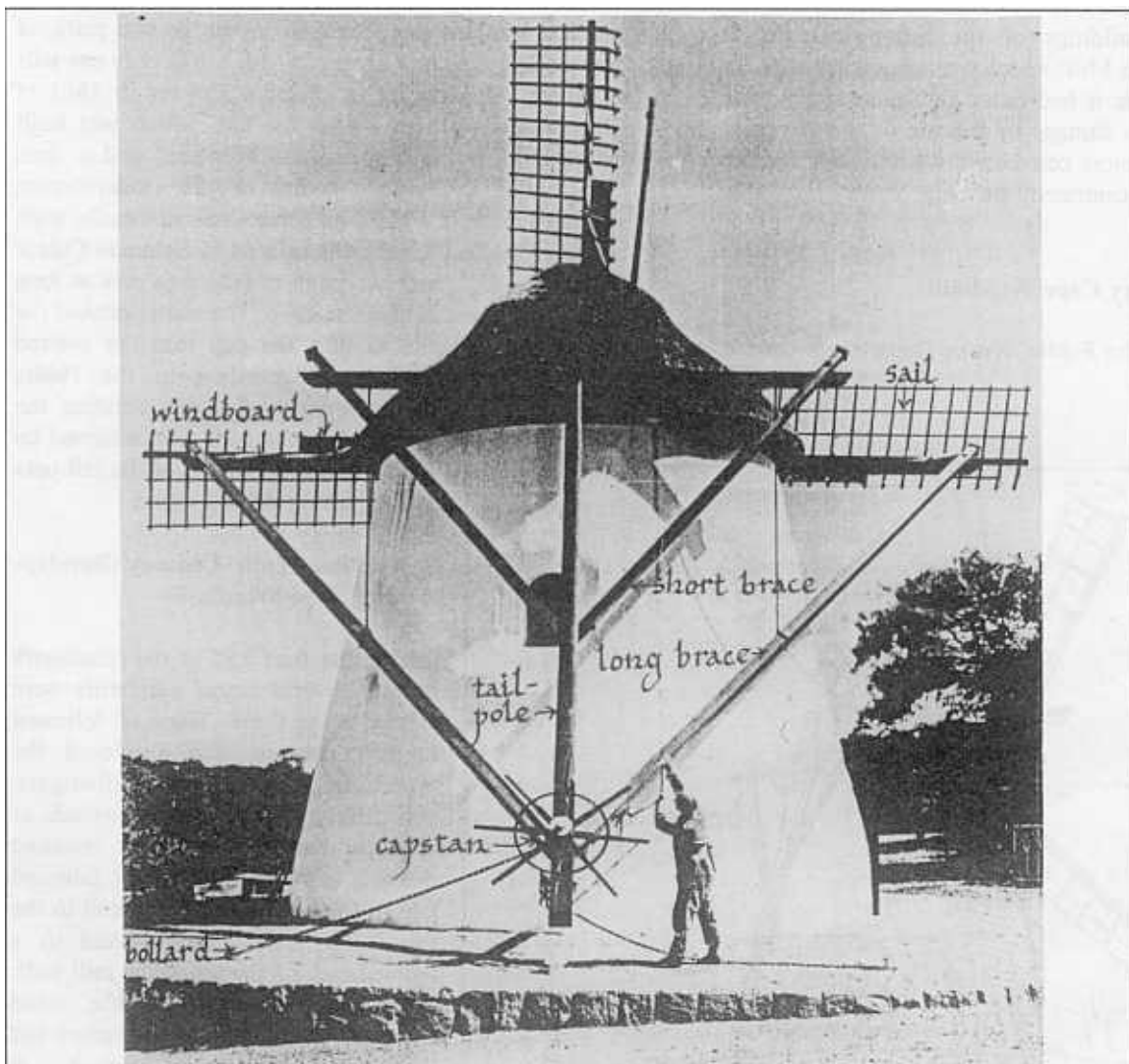
Cape Town, about 1850 to the smock mill which stood in the centre of Durbanville and which was painted by Hendrik van Heerde in 1895 and to several other Cape windmills.

But the Cape millwrights continued to use common sails such as had been employed in France, Germany, Holland, Britain and other north European countries from the thirteenth century. The stock formed the middle of the sail, dividing it into two equal halves. Sail bars were secured into the stock on each side and they were terminated along the length of the sail by a hemlath.

As mills became larger they required more power and this was achieved by lengthening the sails by strapping a 'whip' to the stock. Sails with whips added to the stocks were fitted to the windmill at Pyott's bakery at

Woodstock, Cape Town⁵.

Common sails had sail cloths which in the early stages were threaded in and out the sail bars but later a single sail cloth covered the whole sail. The sail cloth was reefed to cover whatever area of the sail was required, as determined by the strength of the prevailing wind. But reefing the sails in wet and blustery weather was an unpleasant and often dangerous task, so in 1772 the Scottish engineer, Andrew Meikle, invented his 'spring sail' which dispensed with the use of sail cloths. His sail had a set of shutters on each side of the stock and these were opened or closed to any desired angle by means of a rack and pinion. The miller would vary the opening according to the strength of the wind but he still had to stop the mill in order to make the adjustment. It was nevertheless preferable to the use of sail cloths. In 1807 William Cubbitt improved on Meikle's shuttered sail by



Mostert's Mill after it was restored by the Dutch millwright, Chris Bremmer, in 1935, showing a tail-pole fitted with long and short braces and a capstan to "wind" the cap and having Dutch aero-dynamic sails with windboards. Source : Cape Archives.

introducing a mechanism which allowed the shutters to be adjusted without stopping the mill. Such 'patent' sails were fitted to the windmill at Windmeul, near Paarl⁶, and to Thomas Sutherland's windmill on Upper Orange Steet, Cape Town.

Development of Dutch Windmills

A different development was followed in Holland. The Dutch millwrights retained the tailpole as the means of 'winding' the cap but they concentrated on producing more efficient sails, still using sail cloths. To facilitate the use of the tail-pole a capstan was fitted to the bottom of the pole. Around the barrel of the capstan was wound a chain, the end of which was secured to one of a circle of bollards around the base of the mill. As the miller turned the capstan, even standing on the spokes to do so if necessary, the chain was wound on to the barrel, so pulling round the cap.

The sail developed in Holland was a lattice sail with three-quarters of its surface area on one side of the stock (the 'trailing' side) and one quarter on the other side (the 'leading' side). The narrow 'leading' edge was set at an angle to the main sail and was covered with detachable boards which directed the wind on to the sail. The sail bars were each set at a slightly different angle from the next, so giving an aero-dynamic twist to the sail.

The 1935 Restoration of Mostert's Mill

In 1935 it was decided to restore Mostert's Mill, and a young Dutch millwright, Chris Bremmer, was commissioned to carry out the task. He found the internal machinery of the mill almost complete except for the feed to the stones and other woodwork on the stones floor, which he replaced according to a prevailing Dutch pattern. A new windshaft and brakebeam and lever were made and the brake wheel, bearing the engraved date of 1796, was restored. But the sails and tail-pole, with its associated braces, had entirely disappeared.

In 1988 Chris Bremmer wrote a series of five articles in *De Molenaar* describing his visit to South Africa and in his article on the actual restoration he said 'stocks, tailpole and braces had probably been removed a long time ago. That there certainly had been short braces had yet to be confirmed by the presence of the fixing bolts in the old cross beams. Nevertheless, Bremmer did fix both short and long braces to the tail-pole.

Bremmer continued "Many years later people claimed that the presence of short braces was a fault introduced in the restoration, in the same way as the presence of a "Dutch" winding gear (i.e. the capstan).

But because there was no tailpole, not even remnants of it, there was no evidence of how the cap had been moved before. Possibly it was with an ox! As all other evidence

pointed to the origins of the mill being "Dutch", it was later decided to put on a winch⁷.

So far as I am aware, there is not a single reference nor a single illustration of a capstand (winch) being fitted to the tail pole of a South African windmill apart from that which Bremmer fitted to Mostert's Mill. The tail pole with both long and short braces and a capstan (winch) and Dutch type aero-dynamic sails with windboards were all introduced by Chris Bremmer when he restored the mill in 1935. As Bremmer states, he really created a Dutch mill, even to the extent of adding a 'beard', a decorative name-board below the poll end of the mill, which also was not a feature of Cape Windmills.

An opportunity has again arisen to restore Mostert's Mill. The main issue is to decide whether to restore the mill as an eighteenth century Cape windmill (the only complete Cape windmill still surviving) or as just another Dutch windmill such as Chris Bremmer created in 1935.

ENDNOTES

The year 1796 is given as the date when Mostert's Mill was built, because that is the date engraved on the brake wheel of the mill. There is no other evidence to support that date and it may well have been built earlier, for, on a map of the area dated 1787 (Cape Archives No. M1/895) what appears to be a representation of a windmill is shown near where Mostert's Mill stands, indicating that the mill was built before 1787 (Woongids, Die Burger, 28 January 1995).

- Walton, James: Water-mills, windmills and horse-mills of South Africa 1974, Fig. 113.
- Walton, James: op cit., Fig. 121.
- Walton, James: op cit., Fig. 122c.
- Walton, James: op cit., Fig. 127b.
- Walton, James: op cit., Fig. 128.
- Bremmer, Chris: 'Molen "Welgelegen" of "Mostert's Meul" te Kaapstad', De Molenaar 21 December, 1988 (Translated into English by Joanna Marx).