

**CAUDWELL'S FLOUR MILL
ROWSLEY
DERBYSHIRE**

**A Report on aspects of the interpretation and
Management of Caudwell's Mill in the care
of a Trust for its preservation**

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CAUDWELL'S MILL, Rowsley, Derbyshire

Introduction

As Curator of South Yorkshire County Council's Worsbrough Mill Museum (a working water powered corn mill) I have had a knowledge of Caudwell's Mill for some years and visited it while it was still working. Recently (14 November 1978) I went to see the mill again with Mr Clive Prior of the Peak Park Board and agreed, as a result of that visit and the subsequent discussion at Mr. Prior's office, to put some thoughts down on paper.

It must be appreciated that what follows is the result of brief visits to the mill, a lifelong interest in flour mills and experience of a site museum at Worsbrough; it is not a detailed recommendation of what should or should not be done at Caudwell's.

The importance of Caudwell's Mill

For over 2,000 years, and until the late 19th century in this country, bread flour was made by the traditional stone milling process. For a variety of reasons, both mechanical and economic, the miler milling "gradual reduction" process was introduced from the 1880's onwards in the UK and roller mills very rapidly supplanted many of the small rural stone mills and forced their closure. Today a number of stone mills, both wind and water powered, have been preserved as working demonstrations of the traditional flour milling process. The roller milling revolution, on the other hand, is not represented at all in the museum/preservation context although over 90% of "our daily-bread" is made from flour ground in roller mills.

Caudwell's mill is unique in having survived as a family business which was an early conversion from stones to the roller process and to water turbine power rather than the more cumbersome water wheel. The mill still contains a number of early machines which are now very rare, if not unique and is small enough to be a practical proposition as a roller milling "museum" (for want of a better word but see below) and one which visitors can comprehend as a whole.

Interpretation

Interpreting any industrial process is difficult since many visitors, though potentially interested, are mentally resistant in that it is "too complicated" for them or they "can never understand machinery anyway".

The Caudwell situation is further complicated because the wheat flour (for bread) and the provender mills are side by side under the same roof. Since it seems likely that the provender

side may well be working in a revenue earning capacity if the mill re-opens, the substance of the following refers to the wheat side but much of it has general application.

Identification with objects within the average visitor's experience is always a useful starting point. In a flour mill the wheat input ("golden corn", harvest, farmers) is familiar and so is the flour (bread, baking) so the main need is to establish the links between the two and relate them to the flour mill.

Wheat: the wheat grain is in three identifiable parts which are the brown outside (bran, health food, horse food), the wheat germ (growing point of the wheat seed, health food) and the white endosperm (white flour.) which makes up the bulk of the wheat grain. The miller thinks of the bran and the wheat germ as "impurities" which "discolour" the white flour,

The miller: seeks to separate the various elements of the wheat grain to whatever extent he thinks necessary; he talks of the amount of separation as a percentage "extraction rate" with the lowest figure of about 70% extraction representing the purest white flour. A high percentage extraction rate implies a "brown" or "wheat meal", flour which will make brown bread. The decision on the type of flour which is produced is essentially a commercial one reflecting demand from bakers and general consumers.

The roller mill: achieves the separation which the miller requires in several stages

Grinding/crushing - done on the roller floor

Mechanical sieving (i.e. shaking) - the plansifters

Mechanical and air assisted sieving (i.e. shaking and sucking/blowing)
- the- purifiers

If the essence of the mill can be reduced to three essential processes then this simple division should be consistently followed through in the interpretation - perhaps with an anthropomorphic grain of wheat or some other easily recognised symbol as a "lead-on".

Practical applications at Caudwells

1 There are a number of outbuildings which could be used for reception/interpretive areas for visiting groups and the general public. Caudwell's had a small "museum" of milling artifacts in one of the buildings which always attracted interest.

Such an introductory display should establish the main divisions and main names to be used in all other interpretive/material and the main themes of the interpretation. It is essential that everything is done consistently throughout and that a common terminology for all machinery and processes is established and is adhered to.

2 The route visitors follow round the mill will probably have to be dictated as much by safety and ease of movement as by a logical progression from wheat to flour. However, in a roller mill, labelling of machines and of spouts carrying wheat and milled products is common - it can be seen at Caudwell's and at other roller mills though often in a rather cryptic form.

This convention of labelling - and of colour coding in some mills - could usefully be employed, with discretion, to relate to the main processes and machine names which have already been given to visitors in interpretive displays and literature.

3 There are large areas of spare and open space on the plansifter and purifier floors where interpretive material relating to that floor would not be too obtrusive. Sectioned models of the machines at work might well be relevant in this context and the principles of the machines - sieving and aspiration - can easily be illustrated with fairly simple demonstration models which visitors could perhaps work themselves. Terminology must be consistent (I see that I have used the term "aspiration" here without having used it on page 2 in defining the processes!) and sectioned models must be simple and recognisable as the machines to which they refer.

4 The heart of the mill, the roller floor, is rather cluttered at Caudwell's but it is important not to alter it significantly if its integrity is to be maintained - it was cluttered when it was working commercially so that is how it must be seen.

The principle of the roller mill is essentially simple and could be demonstrated by using one of the SIMON DD type two-roller mills (probably unique survivors of c.1915 vintage), two of which remain at the front (visitor side) of the roller floor. One of the two which has been out of use for 30 years might be moved to the proposed permanent interpretive display where it would make a magnificent centrepiece, turned slowly with a fractional horse-power electric motor. The other, remaining in-situ, could be supplied with a handle and pulled over by hand to demonstrate to visitors the principle of the feed rolls and main rollers in the machine.

5 The extension of the flour making process to include the baking of bread is logical and one which many visitors are likely to appreciate. There is sufficient space in the existing outbuildings to provide a small bakehouse and to use it on special working days and perhaps, by arrangement, with visiting groups who might do their own baking up of some flour from the mill.

Management of the project

It is beyond my brief to discuss the management proposals in any detail but I did read through the paper prepared by Mr. Gary Emmerson with interest and I agreed, generally, with the points which he makes. The following, rather random, observations may be of interest.

1 Toilet's ; The building of a toilet block is likely to be expensive and a temporary alternative until the project was financially more stable might be worth consideration. At Worsbrough, where there is no main drainage, a Portaloo unit, (2 urinals, 2 WC's, 1 washbasin for men, 3 WC's, 1 washbasin for women, pump circulated cess tank under the unit) has been used with success for 2½ years averaging about 35,000 visitors per year.

2 Staffing ; I felt that Mr. Emmerson's proposals were a little top-heavy since both his Warden/Miller and the two assistants were all on the same salary and all therefore potentially "chiefs" in relation to very few "indians"

The present staffing at Worsbrough may be of interest:

- 1 professional curator (who lives on site at a peppercorn rent)
- (1 full time assistant - POST AWAITING ESTABLISHMENT)
- 1 full time attendant
- 1 part time attendant (20 hours) (who runs the Museum shop)
- 1 cleaner (10 hours) (who cleans the public areas excluding the Mill itself)

Obviously staffing influences the type of interpretation which can be covered. At Worsbrough the Curator deals with group visits (which are all pre-booked) and casual visitors use the self guiding brochure which is available free. The mill is not in commercial production (as Caudwell's might be on the provender side) but such staffing - without the assistant whose post

is not yet established - is barely adequate. Sickness causes major problems - especially to ensure the continuance of supervision to satisfy 1974 Health and Safety provisions.

3 The Manager ; the key to the success of the Caudwell's project lies with the manager - designated as Warden/Miller in Gary Emmerson's report. The Mill Manager - and that name avoids the custodian/caretaker associations of "Warden" - needs to be of the highest calibre with a great variety of skills; the salary proposed by Gary Emmerson will not be very attractive, particularly if the assistants get exactly the same. The manager is likely to need (in no sort of order)

- dedication
- a preparedness to turn his hand to anything and work at anything from repairing WC cisterns to lecturing to learned societies
- an ability to communicate, interpret and teach
- a knowledge of the history and methods of the flour industry
- a good knowledge of basic mechanisms such as are found in a mill
- managerial and administrative qualities
- imagination and the ability to organise and inspire others - both paid staff and volunteers
- education and personal qualities likely to generate confidence in those trading with or helping the project.
- an understanding and appreciation of museum ethics in the context of conservation

(see under 4 below)

It would in many ways be ideal if the Mill Manager lived on the site or at least very close to it, "The gaffer must be on the job" is a very sound maxim. To be on site certainly greatly stimulates the sense of personal involvement.

4 The Mill Museum. The term museum is much misused, partly for want of a suitable alternative. Professionally a museum should acquire, conserve, store, display and research its collection(s) in the ways best suited to the objects in the collection(s). It should also offer services like access to its reference collections (artifacts, photographs, documents, books etc.) and be prepared to answer queries and deal with professional enquiries, Such work is very labour intensive and costly in terms of time and therefore money.

Nevertheless, an awareness of the standards of the best museums and a desire to reach them is the best way of ensuring that proper care is taken of Caudwell's Mill if it is preserved.

5 Working the Mill. To work machinery which is old and may in some cases be unique might be clean contrary to any code of professional museum ethics but if the mill is to be a working museum then decisions must be taken on when, and how much the machinery is to work. A code of Practice should be evolved from the beginning.

If flour is to be produced then the Mill comes under the provisions of the Factories Acts and safety requirements could be very stringent, especially if visitors are to come round when the mill is working. Account would also need to be taken of Public Health regulations.

6 Finance. Appended are approximate costings for the Worsbrough project (which should be regarded as confidential). They do provide a yardstick which can be related to the figures in Gary Emmerson's paper.

Capital costs

Purchase and restoration 1971 - 1974 (under WACC)	£45,000
Restoration 1974 - 1976 (under SYCC)	£10,000
Interpretation 1974 - 1976	£ 5,000

Revenue costs (1976/77)

Staff costs

wages, salaries, NIC and superannuation	
staff training courses	£10,500

Fixed costs

building maintenance, machinery maintenance, electricity, water, rates, sewage disposal (cess pits)	£4,500
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Establishment expenses

mainly purchase fund for shop	£2,750
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TOTAL £17,750

Income

Admissions

Trust the Visitor scheme, Adults 10p, children, 5p OAP's and school parties free. 35,000 visitors per year	£1,500
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Sales in Mill Museum Shop	£3,000
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TOTAL £4,500

NOTES

* Worsbrough is run as a county council Museum which is a service already paid for (in crude terms) on the Rates.

* Shop prices reflect the same principle - they cover costs and do not undercut other traders but prices are not commercially competitive.

* A special events and temporary exhibitions budget is voted each year for the Mill; in 1976/77 it was £2,500.

It is broadly true to say that in any one year at Worsbrough the running costs are £20,000 (including the special events vote) and the anticipated income is about 20% of this figure, No charge is made for special events and the suggested admission charges are very low; shop prices too could bring in a larger income. If flour was ground on a regular basis it would undoubtedly sell well; at present 4 tons is ground in a year.

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