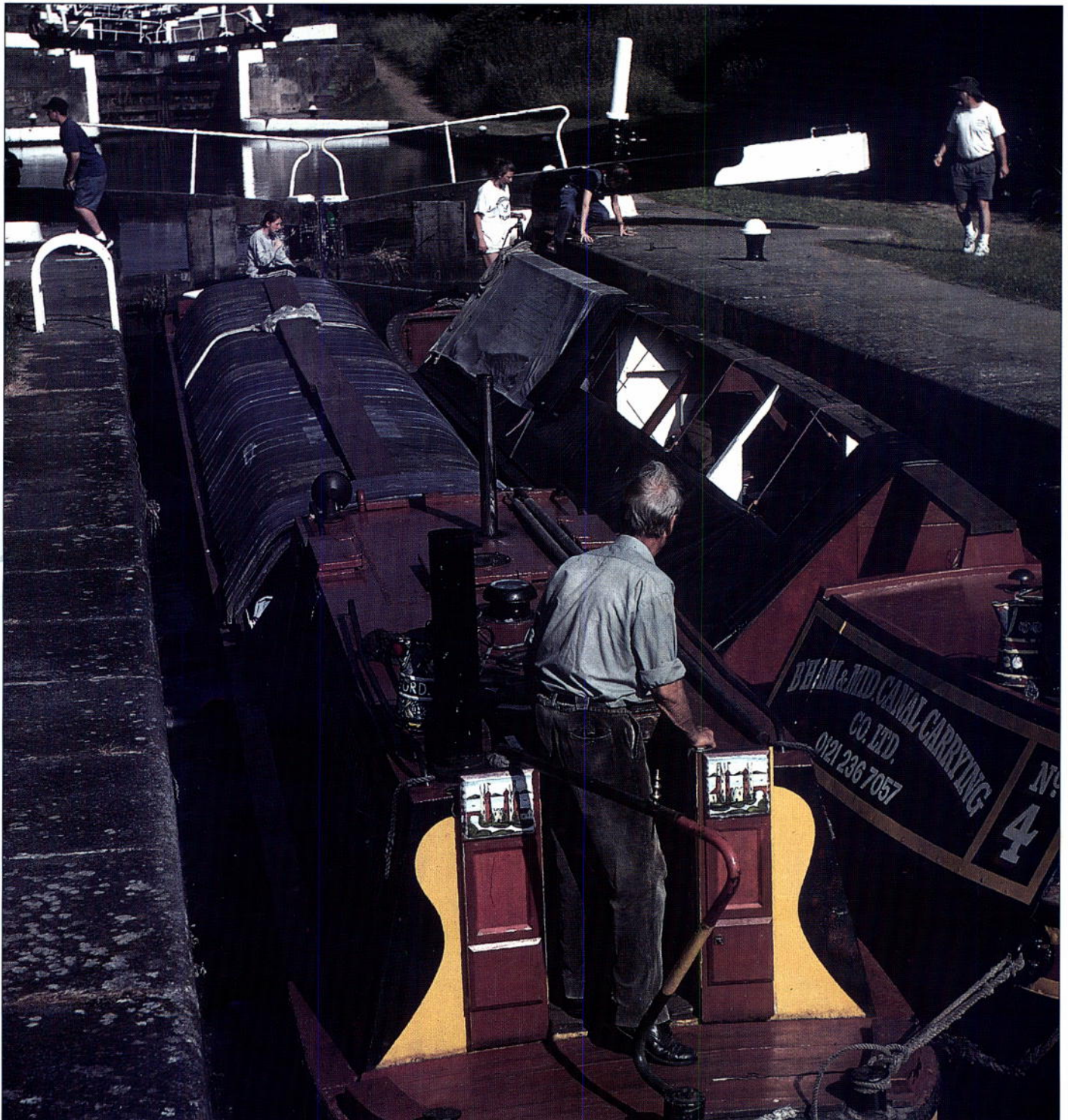


# INDUSTRIAL ARCHAEOLOGY NEWS

125  
SUMMER  
2003

THE BULLETIN OF THE ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY

FREE TO MEMBERS OF AIA



Madeira sugar mill • Essex breweries • first factories • new Dorothea award  
Torksey viaduct • Erasmus prize • regional news • canal publications





# INDUSTRIAL ARCHAEOLOGY NEWS 125 Summer 2003

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## COVER PICTURE

*Narrow boat Collingwood and butty Ash working up through the Hatton Locks on the Grand Union Canal. The popularity of the waterways is reflected in a batch of new publications (see page 19)*

*Photo: Peter Stanier*

## Safeguarding the heritage of the Hinton Sugar Mill, Madeira

*Portugal has contributed to the principles of sustained development and the safeguarding of our heritage in the Council of Europe as well as the ratification of conventions regarding the archaeological heritage of Europe. In light of these common principles ARCHAIS (Associação de Arqueologia e Defesa do Património da Madeira) considers the announcement of the demolition of the Hinton Sugar Mill (formerly the Torreão Factory) to be a grave violation by the regional and local authorities of Madeira. The mill is an important vestige of Europe's history of the Madeira archipelago with Europe. The author is President of ARCHAIS.*

Élvio Duarte Martins Sousa

Soon after the discovery of the Archipelago of Madeira in the fifteenth century, a perfectly unrestricted economy developed here, orientated to the export of sugar to Northern Europe, where the rise of urban settlements had resulted in the search for new opportunities. This fact represented not only a transformation from the subsistence economy and provision of food for the crown to another type of economy impelled by profit making. This also meant the archipelago, which at the time was relatively autonomous from the authority of the kingdom, became part of the new Atlantic Europe, characterised by strong commercial and cultural relations.

On the other hand, the structure of this economy, based on the production and export of sugar, was associated with the emergence of a conflict of interests: a tendency towards monoculture as opposed to the need for a more diversified type of agriculture and the regulation of the export trade by the King as opposed to the wish for a more liberalised economy by the major merchants. This would also explain the change in agriculture to other export products, namely

wine, at times when sugar trading was in decline.

The nineteenth century saw the last revitalisation of sugarcane production, in conformity with the tendency seen in Mediterranean agriculture towards a proliferation of labour intensive plantations as the solution to under-employment in countries and regions with a large population growth and late industrialisation. In the archipelago of Madeira, the return to sugarcane production was correlated with the phase of decline in the wine cycle, another dominant product in the regional economy of the time.

Sugarcane was cultivated under a system of small properties and intensive mixed farming. Local industry transformed this primary product into sugar, meant for export to continental Portugal and the Azores (in the second half of the century), and into another two new products, brandy and alcohol intended for the local market.

The local industry was comprised of factories for processing sugarcane and sugar mills for the production of brandy and sugar, equipped essentially with traditional technology using animals for traction and the motive force of water, although steam had already been in use for milling by some factories. As had been the case all over the world, the technological innovations of the nineteenth century were not incorporated homogeneously by all local industry, but only the firms that had a greater investment capacity. These were Ferraz & Brother and William H. Hinton & Sons, the latter established in 1856 and proprietors of the Torreão Factory – known as the Hinton Sugar Mill by the local population.

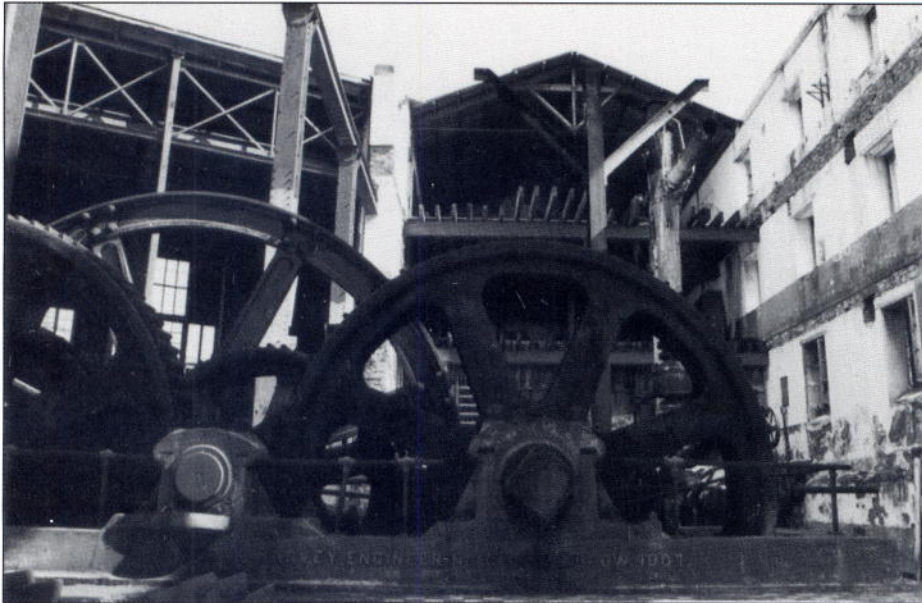
These factories became the leaders in the absorption of technological innovations and the sugar manufacturing methods which took place in the nineteenth century. These included the Bour concentrators and centrifuging machines, invented in the 1840s and at the century's end, and the introduction of chemical processes, which



Aerial view of the Hinton Sugar Mill, Madeira

Photo: ARCHAIS





Abandoned machinery in the Hinton Sugar Mill

Photo: ARCHAIS

led to a reduction in labour, great increases in productivity and huge reductions in costs. The way had been opened therefore, to large-scale production, the characteristic feature of twentieth-century industrialisation. And Hinton did not waste such an opportunity, for between 1913 and 1915 the Hinton Sugar Mill reached close to 5,000 tonnes in annual production and the capacity to mill 500 tonnes of cane in 24 hours. In a short time, the Hinton Sugar Mill became internationally renowned and is now considered by various connoisseurs as 'one of the most perfect in the world' and 'one of the rare jewels of the archaeology of nineteenth-century sugar production in the world.'

Protectionism took effect on the whole of the sugar-based economy, from the farmers to the brandy, alcohol and sugar producers and it arose as a pretext to attenuate the crisis in the sector as a result of the diseases that affected sugarcane in 1881-85. According to the protectionist regime, the producers would benefit from a reduction in customs duties in the importation of molasses used in the production of brandy, if the sugarcane was acquired locally at high prices. Obviously the Hinton Sugar Mill, with its high production capacity, would benefit the most – in 1909 it used up more than half of the sugarcane sold to

industry – even more so when, in 1904, the registration of factories made industrial production more restrictive.

From the start of the twentieth century, this sugar mill had actually achieved a monopoly in sugar production in Madeira, benefiting from exemptions from customs duty in exports to continental Portugal, although the capital-intensive nature of its production also contributed to this.

The factory's employees had access to a number of social benefits which arose during the second English industrial revolution and Hinton put them into the contracts drawn up between workers and the factory. Some examples are certain widow's pensions and two private rooms which were reserved at the Hospital in case they were required by Hinton's workers.

The Hinton Sugar Mill complex is a sober example of nineteenth-century architecture in the neo-classical spirit. Of particular interest is the main facade facing Rua 31 de Janeiro. It is of a restrained style and has frames in grey regional ashlar masonry around the windows and doors. The eighteenth-century industrial complex includes outbuildings that were used as offices and for administrative services. The whole complex is built in stonework and wrought iron,

and there are also verandas with a porch. The large brick chimney stands out imposingly.

The Hinton Sugar Mill is not only fundamentally associated with the history of sugar production in Madeira, but it is also reflects the economic dynamics and policies of the nineteenth century, and in particular transformations in the process of industrialisation and the capitalist system taking place at that time. Keeping in mind the values of memory, authenticity and historical rarity, together with the representation of the sugar industry in the History and Cultural Heritage of Madeira and Europe, various personalities have pointed out the urgency to conserve the century-old factory which is probably the only vestige in Madeira of the first effects of the local Industrial Revolution.

However, the Municipal Council of Funchal has a project for a garden in the area of the factory, for which reason ARCHAIS has appealed that this project for the garden should include the relevant architectural structures and the industrial machinery still in existence. We also appeal to the Regional Government to classify the factory as national heritage. This proposal has been widely accepted by the public, also as a result of the campaign that we developed, and which includes the contribution of proposals – all in the aim of recovering the mill – and participation in surveys promoted by the media. The intention to demolish the entire built complex with the exception of the chimney is seriously worrying. Besides going against the objectives and preoccupations of the International Community in this area, it shows disregard for the European Convention for the protection of our architectural heritage, of which Portugal is a signatory, as well as for the concepts of the Council of Europe on our common heritage.

Thus, in the belief that European citizenship and co-operation reinforces the capacity to safeguard these common values, we would like to alert you to make the regional authorities aware of the need to reflect on the European concepts in the decisions regarding the Hinton Sugar Mill, namely the conservation of the architectural structure, of the facade on Rua 31 de Janeiro, the chimney and the existing machinery. Besides being of scientific, pedagogical and tourist interest, this heritage complex would fit in well within a green space in the same area.

## AIA CONSERVATION AWARD

With a prize of £500 attached, the AIA is pleased to announce the re-launch of the Annual Dorothea Conservation Award, made possible by the sponsorship of Dorothea Restorations Ltd.

The Award is aimed at amateur and voluntary groups, and the project must be ongoing and have been in progress for at least 6 months.

Submission of application form by 31 July 2003

Successful short-listed projects will be notified by 30 September 2003, then have until 31 March 2004 to complete the final submission.

Details from the AIA web site [www.industrial-archaeology.org.uk](http://www.industrial-archaeology.org.uk), or from the organiser, David Lyne, 10 Somerville Road, Leicester LE3 2ET.