



# SALTFORD BRASS MILL PROJECT

## Annual Report – 2018 / 19

### Aim

1. This annual report of the Salford Brass Mill Project covers the 2018 operating period and preparations for the 2019 operating period.

### Charitable Purposes

2. The project group was formed in 1997 and registered as a charity in 2017. The Charitable Purposes of the Project are:
  - a. To conserve Salford Brass Mill for the public benefit.
  - b. To advance the education of the public in the subject of the Mill.
  - c. To advance education for the public benefit in the history of the brass industry in North East Somerset and the Bristol region by facilitating and supporting research into the industry, its working method and people involved.
  - d. To advance education for the public benefit in the metal industry's heritage, history and relevance for today, particularly in relation to the its place in North East Somerset and the Bristol region.

### Activity

3. This report covers activity and progress in achieving these purposes.

### Meetings of the Trustees

4. As well as informal meetings, a formal meeting of the Trustees took place on 1<sup>st</sup> March 2019.

### Structure of the Report

5. The activity in pursuance of its charitable purposes is described under the headings:
  - a. Conservation of Salford Brass Mill.
  - b. Education of the Public.

### Conservation of Salford Brass Mill

6. Conservation of the mill has focused on:
  - Survey of the watercourses.
  - Inspection and repair of penstock gates<sup>1</sup>.
  - Laser scan and drone survey of the mill.
  - Maintenance of the garden.

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<sup>1</sup> A Penstock Gate is a type of Sluice Gate used to control the supply of water to a waterwheel. In this report, the term Penstock Gate is used to describe those gates which control the speed of a waterwheel while the term sluice gate is used to describe gates which are used to control the level of the river.

7. The SBMP Volunteers contributed over 1200 man-hours of effort to opening and maintaining the mill during the open season between May and November 2018. Volunteers also supported out-of-season working parties on the 2<sup>nd</sup> and 4<sup>th</sup> Saturdays of each month from November 2018 to May 2019, supported mid-week out-of-season visits and carried out off-site support activities, including, administration and preparation of talks.
8. Future conservation work will focus on:
  - Repointing of walls highlighted as in need of repair by the building survey.

### Watercourse Survey Penstock Gate Repair

9. In April 2018, members of the SBMP met with the B&NES Local Authority Surveyor, Miles Barnes, to consider options for survey of the four culverted watercourses which pass under the mill and repair of Penstock Gate No 1, which had been deteriorating over recent years. The objective of the survey was to assess the condition of the watercourses and inform plans for any future conservation work.
10. A feasibility study and options report were produced in the Spring of 2018 [Ref A and B], which concluded that the penstock gate should be replaced within the next 18 months. The survey and repair would require damming of the major mill leat upstream of the four watercourses. The location of the dam had to enable safe working in the culverts and minimise the impact on Mill Island Moorings Ltd's business, so far as is reasonably practicable.
11. Funding was provided by B&NES in 2018 and, having obtained the necessary permissions from the Environment Agency and Historic England, the work was conducted by members of the SBMP in October 2018.

#### *Watercourse Survey*

12. The results of the survey are reported at Reference C.
13. Overall, the masonry was found to be stable but would benefit from re-pointing. A programme of work to carry out this exercise will be produced in due course. There was found to be heavy silting throughout the watercourses, in particular in areas of still water. Having carried out repairs to penstock gate 1 and penstock gate 4 it is the intention to routinely operate the three operational gates to reduce the levels of silt. The tail-race leat walls of all four watercourses were in a poor condition, masonry having been displaced, fallen and/or been robbed-out. A programme of work is required to stabilise these structures, rebuild where appropriate within the constraints of the scheduling and listed status and generally repoint the structures.
14. The survey identified a number of surprising results:
  - A previously unknown, fifth watercourse was discovered on the eastern side of mill. The watercourse is not recorded on plans of the mill dating back to 1839 and the purpose of the watercourse is not immediately apparent. The watercourse will be the subject of future research.
  - A subterranean chamber was discovered beneath the dynamo room, forming the head-race to western watercourses 3 and 4. The chamber is approx. 5.75m x 6.0m. The area may originally have been open water and later covered to enable expansion of the mill. There is an opening in the roof of the chamber immediately upstream of watercourse 3 which was covered by modern decking. The decking has been replaced with an open grillage to enable visitors to view the watercourse; contributing to our objectives of, for the public benefit, conserving the mill and educating the public in the methods of working of the mill.

- Watercourse No 3 was found to be sealed by a well-coursed masonry wall. It is assumed that this was carried out in the 1920s when the mill was adapted to become a sports centre with a squash court being built in the former battery mill which was driven by waterwheel No 3.

#### *No 1 Penstock-Gate*

15. Exceptionally low river levels in the summer of 2018 enabled a dimensional survey of the old gate to be carried out prior to damming of the major leat, so enabling timber to be purchased in advance of damming and hence reducing the length of time that the dam needed to be in place. A new penstock gate was constructed using greenheart timber. Following damming of the major leat, the old gate was removed and the new gate installed. Some repair work was required to the mounting arrangements of the gate and the opportunity was taken to open up the area around the gate to enable visitors to see the mechanism and observe the penstock gate in use. No 1 Penstock is now an additional feature in the mill which contributes to our objectives of, for the public benefit, conserving the mill and educating the public in the methods of working of the mill.

#### *No 2 Penstock-Gate*

16. No 2 penstock-gate controls the water supply to the working waterwheel and was subject to a repair in 2016, the gate being replaced with a 'sandwich' construction of two sheets of 18mm marine-ply (36mm in total). The opportunity was taken to inspect the gate. The gate continues to perform well. No evidence of deterioration was found; hence the decision was taken not to replace No 2 penstock-gate at this time but to continue to monitor its performance and condition.

#### *No 4 Penstock-Gate*

17. No 4 penstock-gate is of steel construction, as opposed to the timber construction of gates No 1 and No 2. The stock includes a gooseneck which was found to be seriously corroded. A galvanised steel insert was cut and bolted into place as a strong-back repair. The gate continues to be serviceable and is now routinely operated to flush silt from the watercourses. Replacement deck-plates have been manufactured and placed around the operating mechanism which enables members of the public to view its operation, contributing to our objectives of, for the public benefit, conserving the mill and educating the public in the methods of working of the mill.

### Laser Scan and Drone Survey

18. The survey was conducted at an opportune time as B&NES had recently acquired a laser scanning capability for the survey of structures in the city of Bath which they were able to deploy at Saltford. One of the SBMP volunteers also had access to an aerial drone capability, which combined with the laser-scan enabled a thorough survey of the mill to be conducted.
19. A full survey of the mill and watercourses was carried out by members of the SBMP supported by B&NES surveyors. The survey comprised a combination of visual inspection, photographic record, conventional measurement, aerial scan using a drone and 3D laser scan. Of particular value was the use of a Leica RTC360 3D laser scanner made available by B&NES.

### Lighting

20. On completion of the survey and conservation work, the opportunity was taken to re-order the mill to enable better access to the key parts of the mill for members of the public. Improvements have been made to the lighting of the display panels to enhance the visitor experience and aid education.

### Garden

21. The gardens continue to be maintained to provide a pleasing vista in The Shallows and to set the mill in an attractive setting. Maintenance of the gardens is a major activity conducted by volunteers of the SBMP, involving on average 2½ man-days of effort every two weeks throughout the year.

## Future work

### *Re-pointing*

22. The next major programme of conservation will involve re-pointing of those structures identified as in need of repair in the survey. The areas comprise:
- External walls
  - Watercourse walls, accessible without de-watering.
  - Watercourse walls, requiring de-watering to enable access.
23. This will be an ongoing project. In the first instance we will address those external walls to which there is easy access. We are currently investigating the different types of mortar that are available to determine which is the most appropriate for use at the mill. Once an appropriate mortar has been identified and demonstrated, Historic England consent will be sought to proceed with the repairs.

## **Education of the Public**

24. Education of the public about the mill has focused on:
- Visits to Saltford Brass Mill.
  - Talks to Local History and Interest Groups.
  - Bath Spa University – Huron University College exchange - ‘Phantoms of the Past’
  - Production of a TV Documentary – ‘Enslaved’.

### *Slavery*

25. The prime market for brass-ware in the eighteenth century was West Africa where copper and brass was in demand for barter in the slave trade. This was the driver for the formation of the Bristol Brass Company and remained the dominant market until the abolition of slavery in 1807. Interpretation of the Brass Industry has to-date focused on the technical aspects of brass production and the people engaged in the brass-making processes. Consideration of the markets has been secondary. But increasingly the relationship with the slave trade is of interest to the visiting public. This was exemplified in 2017 when the brass mill featured in the BBC West documentary ‘Civilisations – The Remains of Slavery’ and the mill was used as a venue for the Bath Spa University sponsored ‘Sweet Waters’ project, considering the echoes of slavery in Avon Valley. That theme has continued in 2018/19. In February we had a visit from Huron University College in Canada, on an exchange visit with Bath Spa University, the objective of which was research into the slave trade in support of a project entitled ‘Phantoms of the Past’. The mill was also featured in the filming of a new television documentary – ‘Enslaved’. The displays in the mill have been amended to reflect this interest.

## Visits

26. The mill has continued to have a steady stream of visitors, the visits being a combination of group visits by local interest groups, open days on the 2<sup>nd</sup> and 4<sup>th</sup> Saturdays of the month and specialist open days. In the period under report, the SBMP:
- Opened the mill to the public on 29 occasions.
  - Welcomed 763 visitors.
  - Hosted 10 group visits.
  - Opened for National Mills Weekend.
  - Opened for National Heritage Open Day.
  - Opened for B&NES Museums Week.
  - Opened for South Wales and West of England Conference on Industrial Heritage

## Talks – Local History and Interest Groups

27. A programme of talks to local history and local interest groups was carried out over the autumn, winter and spring of 2018/19 with a total of 10 talks being delivered. The topics covered included:
- The Early Avon Valley Copper and Brass Industry – 1690 to 1740;
  - The Later Avon Valley Copper and Brass Industry – 1740 to 1927;
  - The Restoration of Saltford Brass Mill; and
  - John Padmore – 18<sup>th</sup> Century Engineer.
28. Two additional talks have been prepared and are now on offer to local history groups:
- Mills on the River Chew.
  - Mills in Widcombe.
29. The additional talks focus on how waterpower was harnessed on rivers and brooks within the Bath and North East Somerset region, taking advantage of terrain, topography and water supply. Six of the fourteen mills on the river Chew were involved in the copper and brass industry and a seventh was a steel mill.
30. A new talk is in production focused on the watercourse survey and penstock repair carried out in late 2018.

## Bath Spa University - Huron University College Exchange

31. The SBMP hosted a visit by exchange students from Huron University College in Canada on 18 February 2019. The visit was part of a joint project between Bath Spa University and Huron University College in Canada. The project is entitled 'Phantoms of the Past' [Ref D], the objectives of which are:

*Phantoms of the Past: Slavery, Resistance, and Memory in the Atlantic World is an interdisciplinary collaboration between Huron University College (History and English/Cultural Studies), and Bath Spa University (History and English). The project places undergraduate student researchers, faculty, and community scholars at the centre of new transatlantic network that examines 18th and 19th-century slavery and antislavery through histories, texts, images, and cultural memory.*

## Television Documentary - Enslaved

32. The SBMP were approached in early 2019 to take part in a television documentary entitled 'Enslaved'.
- The documentary will be a six-part series.
  - The series will be distributed internationally.
  - The film crew were from Cornelia Street Productions.
  - The host for the UK segment is the British-Ghanaian journalist Afua Hirsch.
  - The link man is Professor Mark Horton (Bristol University).
  - Samuel L. Jackson will provide a voice-over (but we are unlikely to see him at the mill!).

33. The blurb for the film [Ref E and F] states:

*Samuel L. Jackson will host a new six-part documentary series that centres on the Middle Passage during slavery. Enslaved will chart the horrors of slavery through underwater archaeology. It will retrace the dangerous ocean journey that took millions of Africans to the Americas to be enslaved. "For me, this is much more than a TV series," said Jackson, whose own ancestors are traced to the West African nation of Gabon. For me, 'Enslaved' is an attempt to give a voice to the millions whose voices were silenced."*

34. Filming took place on 10<sup>th</sup> March 2019 with a follow-up later in the month to record some exterior views of the mill.

### South Wales and West of England Conference on Industrial Heritage

35. The brass mill was opened out of season on the 6 April 2019 in support of the South Wales and West of England Conference on Industrial Heritage. The visit was well received with approx. 45 delegates visiting the mill.

### Family history

36. The SBMP has increasingly been approached by members of the public researching their family history. Many artisans in the industry in the eighteenth century were drawn from a pool of immigrant workers from Germany, with names such as Ollis, Frankham and Fray often occurring in the records. The SBMP have been happy to support such research.

### Video

37. Work has progressed over the winter period to develop a number of video presentations to add to displays in the mill. Two themes are:
- Otters: Otters often visit the mill and there is evidence of their presence around the watercourse penstock gates. A member of the SBMP has set up a motion sensitive camera over one of the gates to record footage of the otters [Ref H].
  - Watercourse and Aerial Drone Survey: A short video has been produced of the watercourse and aerial drone survey which will be on display in the mill.

### **Death of Joan Day**

38. Sadly, we must report the death of Mrs Joan Day on 29<sup>th</sup> April 2019 at the age of 91. Joan was the founder of the Salford Brass Mill Project in 1997 and its predecessor, the Salford Brass Furnace Project of the Avon Industrial Buildings Trust, formed in 1981. Joan conducted extensive research into the Bristol Brass Industry, publishing the definitive work on the subject in 1973 "Bristol Brass: The History of the Industry". Joan was also a founder member of the Bristol Industrial Archaeological Society in 1967, working with Neil Cossons, later Sir Neil Cossons and Director of the Science Museum and Chairman of English Heritage. Joan was Chair of the Salford Brass Mill project until 2010, becoming the group's president in that year, a post which she held until her death.

### **Tony Coverdale**

#### **Chair, Salford Brass Mill Project**

*20 years of Conservation and Interpretation*

*Charitable Incorporated Organisation (Registered Charity Number 1174901)*

*Scheduled Ancient Monument (list entry number 1004607)*

*Grade II\* Listed Building (list entry number 1384676)*

## References

- A. Culvert Inspection and Sluice Gate Repair. Options Study. 13 Apr 2018
- B. Culvert Inspection and Sluice Gate Repair. Schedule of Work and Costs. 10 Aug 2018
- C. Watercourse Inspection and Penstock Repair. Survey Report. Jan 2019
- D. <https://www.huronresearch.ca/phantomsofthepast/>
- E. <https://www.fremantle.com/fremantle-secures-landmark-documentary-series-enslaved-with-samuel-l-jackson/>
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- G. [https://www.b-i-a-s.org.uk/BIAS\\_SWWERIAC\\_conference2018.html](https://www.b-i-a-s.org.uk/BIAS_SWWERIAC_conference2018.html)
- H. [http://brassmill.com/saltford brass mill 020.htm](http://brassmill.com/saltford_brass_mill_020.htm)