

# Gayle Mill

18<sup>th</sup> Century Mill harnesses 21<sup>st</sup> Century Technology.



**Gayle Mill, in Hawes North Yorkshire was built in 1784-5 as a cotton-spinning mill, is now home to one of the UK's most innovative renewable energy projects. This centre for wood working excellence, tourist destination, and TV star from BBC's 'Restoration' show is home to both water turbines for electricity production and biomass boilers for heat.**

**The site was restored to full working order in 2008 and proves that heritage and sustainable goals can be reached without compromise. It provides an educational, leisure and industrial resource in the heart of Wensleydale. Owned by the North of England Civic Trust, it is operated by the Gayle Mill Trust and acts as a shining example of retro fitting for wood-fired heating at it's best.**

## objectives

- To provide a regional, if not national example of heritage restoration and sustainable design working in symbiosis with each other.
- To provide a centre of excellence for the proliferation of traditional woodworking and wood craft skills. Creation of an outlet for locally sourced, supplied and machined timber produce.
- To ensure the continued survival of an historic and iconic building within the locality.

## actions

- Restoration of the mill within 'spirit' of the buildings original intended purpose, as an industrial focus for the village of Gayle and as a 'working' structure.
- Division of the focus of the Gayle Mill Trust into three outcomes;
  1. Provision of a local outlet for timber and timber products, including sustainable machining, kiln drying and firewood to local markets.
  2. Creation of a educational training facility, teaching the traditional wood crafts that are required to ensure other sympathetic restoration projects are possible. Providing coaching for hobbyists and novices in wood working in a stimulating and creative environment.
  3. Creation of a Tourist Destination, with a focus on sustainability, enjoying our working heritage and history.

## achievements

### For Business:

- Tourist visits in excess of original estimates, in the order of 5,500 in their first season. The mill employs 3 staff.
- Contracts to supply timber products to Yorkshire Dale National Park already obtained, specialising in Rights of Way furniture.
- Purchase of a Wood-Mizer mobile saw-bench to allow off site machining at point of felling for local farmers and landowners. The bench will cut 200Ft<sup>3</sup> a day.

### For the Region:

- New, exciting and innovative visitor attraction, education provision and the continued survival of an important local land mark.
- A focal point for traditional wood working skills and a learning resource with aspirations to become part of the National Heritage Training Academy (Yorkshire & Humberside).

## background

- The mill restoration started in 2004, when the North of England Civic Trust bought the mill. The works to bring the site to operational standard took 4 years, costing £1.2M.
- The mill building, with associated office, kitchen and educational/meeting room is heated using a 40kW Froling FHG Turbo 3000 log boiler, installed in 2005. The system uses approximately one ton of firewood per fortnight, normally broadleaf species, gleaned as a by-product from the mobile machining process, utilising the branch wood.
- The boiler cost £11,000, plus £24,000 for the associated pipe infrastructure and is seen as an integral piece of the sustainability message of the mill. The boiler heats a 2200 litre buffer tank for hot water.
- All fuel wood is split by hand using the mills active volunteer group and cut into 24" lengths. In the future, this will also be supplied to the local market in bulk loads on a 'buyer collects basis'.
- The machining enterprise of the mill runs several pieces of heritage wood working equipment, along with a Felder combination machine, a radial crosscut saw, belt sander, morticer, lathe and hand tools. The centre also uses the water turbines to generate its own electricity and power its own Sauno wood drying kiln, therefore offering a complete, local, sustainable service.
- The mill is open to the public 5 days a week between Easter and September (with reduced opening hours in October and November) and hosts several specialist events during the year, all with a focus on sustainability, the local economy and woodworking skills.

## quotes

*"True sustainability builds on the embodied energy inherent in places and people. The distinctive significance of Gayle Mill is that it builds on the traditions of both, so that the succession of generations of technology and craftsmen provides not just a legacy, but an inspiring precedent for the next generation"*  
Graham Bell, Director, NECT

*"It is in the historical spirit of Gayle Mill that energy continues to be created from natural, carbon-neutral sources, and the use of waste wood from our timber services activities chimes well with the whole ethos of our operations."*  
Paul Bisson, Mill Manager

## partners

Econergy  
Yorwoods  
Yorkshire Dates National  
Park Authority  
Gilbert Gilkes & Gordon Ltd  
Dulas Ltd  
Gayle Mill Trust

## funding

Yorkshire Dales Millennium  
Trust SDF  
Yorkshire Forward SDF  
European Regional  
Development Fund  
Heritage Lottery Fund  
English Heritage, YDNPA

## lessons learnt

- The rescue of a historic building and enterprises embracing all aspects of its heritage, community and economic potential incur high risk, and comes at a price. It has required exceptional and sustained commitment from NECT.
- The mill relies on volunteers to create the stores of firewood needed for the winter, it has learnt to ensure that supplies are built up in sufficient quantities, dry/seasoned where possible, prior to the 'heat season'.
- Storage facilities are an important planning consideration, something in short supply at Gayle. The mill is in the process of trying to acquire new appropriate buildings off site.