

Education

Teacher's Kit

Background

Ale, a fermented liquor made from malt and water, was the staple drink for most citizens of the British Isles for many centuries. Early brewing activity took place in the home and was largely carried out by women ('brewsters') to bring a second income to the household. In the medieval period, brewing on the largest scale was carried out in monasteries, in colleges and great country houses which brewed for their own consumption. On a domestic scale, water could be heated over an open fire in a cottage and the beer brewed in the kitchen, but the growth of towns saw the dedicated brewhouse become common place.

At first many publicans brewed their own beer, but increasingly beer came to be supplied by Common Brewers (the name for brewers who did not originally own pubs themselves). Beer supplied by Common Brewers dominated the trade by the middle of the nineteenth century, by which time many of them had begun to buy up pubs in order to ensure a market for their products. From the 1880s onwards many Common Breweries became limited companies, issuing shares in order to raise money to modernise their equipment and to increase their estate of pubs.

Location

Breweries thrived in areas with good transportation links, thus breweries were established in ports such as Liverpool, King's Lynn, Bristol and Newcastle-upon-Tyne. London dominated the coastal trade as well as serving a large urban network. Industrial-scale breweries were first seen in London during the early years of the eighteenth century. These new breweries quickly became major users of steam power. Large brewing vessels, steam-powered pumps, mills, mechanical rakes and mashers were invented and the brewery engineer came into being. By 1740 the 'great common brewhouse' had become a relatively well-known sight in London.

The growth of the canal network enabled towns such as Burton-on-Trent, with its excellent water supply, to become important brewing centres during the nineteenth century, whilst the development of the railways also enabled breweries to distribute their products across the country. St. Pancras Station in London is built over great brick vaults in which beer arriving by the trainload from Burton-on-Trent was stored before being distributed across London. Burton brewers such as Bass and Worthington became household names as a result.

Output

Small scale breweries were unable to compete with the output of the large commercial brewers. The total output of the large commercial brewers increased from a little under eight million barrels in 1830 to almost 30 million barrels by 1900. Burton-on-Trent's brewing industry trebled in size every ten years between 1850 and 1880 although growth slackened around 1880.

Decline

After the boom of the late nineteenth century the brewing industry started a period of decline. During the inter-war years beer output from the UK nearly halved as did consumption. Existing brewing sites were modernised, but there was little new building, and development was generally restricted to modernisation.

Education

Teacher's Kit

The Future of Historic Breweries

There has been enormous consolidation within the brewing industry since 1900. Declining beer consumption and the steady reduction in the number of public houses as a result of public policy led to waves of takeovers and mergers as brewers sought to maintain or increase their market share; as a result the number of breweries in England fell from 1324 in 1900 to 141 in 1975. The last great wave of takeovers, during the later 1950s and 1960s, saw the majority of brewing capacity in England concentrated in the hands of just six major companies. This process of consolidation has continued down to the present day. The decline in the number of historic breweries has been offset in recent years by the opening of new 'microbreweries' as a result of a resurgence of interest in traditional craft brewing.

A number of historic breweries have closed in the past 20 years, whilst others have re-located to a new site close to major transport links. Some survive as important features in the townscape, such as the Dorchester brewery of Eldridge Pope (now converted to residential use) and the Weymouth brewery of Devenish & Co. now housing a shopping centre and tourist attractions.

Other historic breweries continue to produce beer, however, and are likely to do so for many years to come. Many companies remain firmly wedded to the idea of producing beer in the traditional way, and on their historic sites, which may offer the opportunity to increase their income through visitor centres, on-site shops and brewery tours, they include:

Hook Norton Brewery Co, Oxfordshire – built around 1890 this is one of the finest operating examples of a traditional steam tower brewery. hooky.co.uk

Jennings of Cockermouth, Cumbria – a late-nineteenth century working brewery. jenningsbrewery.co.uk/history/ (note: as the website sells beer, there is an 'over 18' age confirmation before getting to this history page).

Palmer's of Bridport, Dorset – the brewery is part-thatched and includes a waterwheel and steam engine. palmersbrewery.com/about/heritage

Theakston's of Masham, North Yorkshire – a nineteenth century tower brewery. theakstons.co.uk

All Saints Brewery, Stamford, Lincolnshire – re-equipped in the nineteenth century it retains a steam engine and early mash tun, and now produces fruit beers. allsaintsbrewery.co.uk

Examples of 'estate breweries' can be found at the National Trust properties of Shugborough in Staffordshire. shugborough.org.uk/Homepage.aspx and Calke Abbey in Derbyshire. nationaltrust.org.uk/calke-abbey/

There is also the National Brewery Centre at Burton-on-Trent where this wonderful 1920's Beer Bottle Daimler can be found. nationalbrewerycentre.co.uk

Wikipedia Image © Terry Whalebone (Creative Commons Attribution 2.0 Generic)



Education

Teacher's Kit

The English Public House

The public house as we know it appeared in the early-nineteenth century, but its origins go back many hundreds of years. Its ancestors were the inn, which provided lodging and refreshment for better-off travellers; the tavern, which provided wine and food, also for the better-off class of customer; and the ale house, which provided simple food and ale (and later beer) for the lower classes.

There was an upsurge in the number of 'beerhouses' especially in London and the industrial towns of the Midlands and the North following the passing of the Beer Act in 1830. These were virtually impossible to supervise, and tales of drunkenness, illegal gambling and worse filled the pages of the press. The situation fuelled the growth of the Temperance Movement, which had started as a reaction to the excessive consumption of spirits, but soon came to oppose all alcohol consumption. In 1869 the Licensing Justices were given control over beerhouses and began to weed out the worst examples.

Under pressure from the Justices and the Temperance Movement, competition to acquire pubs and to attract drinkers increased with brewers investing ever larger sums in providing new buildings with enhanced facilities. The 'golden age' of pub building, which lasted from the 1880s until the first decade of the twentieth century saw ever larger and more elaborate buildings erected in London and the major centres such as Birmingham and Liverpool. Many reflected the strict hierarchy of Victorian society, with multi-room layouts catering for different groups of customers, whilst attractions such as billiard rooms, concert rooms and skittle alleys were often added. Decorative features such as tile work, mirrors, polished woodwork, engraved windows and brilliant gas lighting were employed to entice the potential customer.

The inter-war years saw the construction of 'improved' pubs, built on a grand scale and sited on major arterial roads. Often designed in deliberately anachronistic architectural styles such as 'Brewer's Tudor', these buildings were intended to provide a respectable social centre for new communities.

During the 1960s pub design began to change radically, in response to a rapidly changing society. Increasingly, pub interiors became more open, with far fewer divisions than in the past. The process of brewery takeovers and amalgamations, which by the mid-1970s saw the majority of beer production and the great majority of pubs concentrated in the hands of just six large brewing companies led to a great deal of standardisation as corporate branding was applied across these large pub estates.

The treatment of pubs solely as units of property and other factors such as the high rates of taxation on drink, the banning of smoking in pubs, and competition from supermarkets for alcohol sales, have had a major impact on pub numbers since the turn of the new millennium. The rate of closures has slowed a little since its peak in 2009, when it is estimated that 50 pubs were closing each week, but the future of the public house remains uncertain.

Education

Teacher's Kit

The Brewing Process

- 1 Malting:**

In England this process traditionally took place in a floor malting or (from the 1870s) pneumatic maltings. Some breweries had on-site maltings, while others brought their malt from specialist maltsters. A separate kit has been produced on the malting process.

historicengland.org.uk/content/docs/education/explorer/teachers-kit-malting.pdf
- 2 Mashing:**

At the brewery the malt is milled and ground down into grist, ready for mixing with water, which is known throughout the brewing process as liquor. Hot liquor (water) and grist are mixed either in the mash tun or in a mashing machine which opens out into the tun. The thick, sludgy mix is then allowed to stand for two or three hours at a controlled temperature.
- 3 Boiling the wort:**

The sweet liquid mix (wort) is run off through the floor of the tun. It is then boiled with hops for an hour or two in a large metal vessel known as a copper. Coppers, as the name suggests, used to be made of copper (now stainless steel) and were heated using a variety of methods including wood or coal, through the use of steam coils or external gas firing.
- 4 Fermentation:**

The hot wort is then cooled before fermentation. Originally large, open shallow tanks were used for this purpose, sited near the top of the brewery tower where good ventilation was available. After cooling, the wort is run into fermenting vessels where yeast is added and within 24 hours the surface is covered with a thick, yeasty foam, which is later skimmed off. Fermentation time is typically three days.
- 5 Racking:**

Finally, the beer is either bottled, transferred to wooden or metal casks (racked), or packaged into metal kegs or road tankers.

Architecture

The brewing process made use of gravity to transfer the liquid or wort from one vessel to the next, starting with the mash tun near the top of the building, descending to the copper at the lowest level where the wort was boiled with hops, cooled in a fermenting vessel and the beer drawn off into casks.

Estate and smaller breweries were usually two storied buildings with louvred windows to provide ventilation. Small breweries can often be recognised at the rear of public houses.

Tower breweries housed a larger scale production process and steam engines were used to pump water to the top of the tower and to power the machinery. Louvred windows were employed throughout the building for ventilation. The tower brewery is a feature of many urban locations. The facades of these large buildings are often ornamented with terracotta and other forms of decoration.

Education

Teacher's Kit

Additional Buildings

As additional buildings were added, breweries often became large sites, with buildings grouped around a courtyard. Large brewery complexes may feature:

- Cooperages – for barrel making
- Bottle stores
- Stabling for dray horses
- Wagon sheds
- A maltings
- A water tower
- Workers housing (adjacent to the site)

Sources

Putman, R. (2004) *Beers and Breweries of Britain* (Shire Publications).

Brandwood, G. Davison, A. & Slaughter, M (2011) *Licensed to Sell: the History and Heritage of the Public House* (English Heritage).

Pearson, L. (2010) *Strategy for the Historic Industrial Environment, The Brewing Industry*, A report by the Brewery History Society for English Heritage.

historicengland.org.uk/images-books/publications/brewing-industry/bhs-brewing-ind-shier.pdf/

Pearson, L. *Decorative ceramics in the buildings of the British brewing industry*.

breweryhistory.com/journal/archive/124_5/Ceramics.pdf

Palmer, M, Nevell, M, Sissons, M. (2012) *Industrial Archaeology: A Handbook*, Council for British Archaeology Practical Handbooks.

Breweries are also considered in the *Designation Listing Selection Guide: Industrial Structures* (2011). (historicengland.org.uk/images-books/publications/dlsg-industrial/)

Education

Teacher's Kit

Curriculum Links.

History: Chronological understanding – understanding progression and change in the development of the brewing industry. Examination of the locality and historical source materials for evidence of significant historical events (small scale and tower breweries). Historical interpretation and enquiry – examining primary and secondary source materials, investigating past events.

Science: Investigating gravity, (forces and motion) in relation to the brewing process. Sorting and classifying materials and investigating their origins, uses and how they respond to change.

English & Drama: By examining a range of historical sources, noting their observations and discussing their findings pupils will demonstrate the core skills of reading, writing and speaking and listening.

ICT: Gathering, analysing and presenting information about the brewing industry using a variety of media.

PHSE: Analysing and presenting information from a variety of sources. Exploring personal choice and health issues relating to alcohol and food hygiene.

Activities – use the images in the pack to assist you with the following activities:

- Look for evidence of the brewing industry in your town. Use Ordnance Survey maps to investigate the location of breweries. Look for evidence of large and small breweries, street names (Cooper Street, Malt Street, and Drayman's Way for example). Investigate transport links to and from the brewery.
- Investigate the forces and motion involved in the movement of liquid wort from one vessel to the next, descending through the brewery by examining gravity, forces and pressure. Examine the raw materials used in the malting and brewing process and how they respond to change (grinding, boiling, cooling, etc.).
- Divide the class into two groups:
Group One will investigate the packaging and advertising used by alcohol companies.
Group Two will investigate the dangers of binge drinking and the drink responsibly campaign.
Ask both teams to write the script for and perform a short advertisement/public information film either promoting alcohol sales or highlighting the dangers of binge drinking. Discuss historical attitudes to alcohol, and how the alcohol industry today is working with the government to promote awareness of alcohol issues and safe consumption, and whether this information is reaching young people.

Education

Teacher's Kit



Henry Lovibond & Sons, Brewers, Greenwich, London

This picture, which was used for promotional purposes, shows the brewery that Henry Lovibond had built in the grounds of his house, The Hermitage, in 1867. From left to right is the copper house, the brew house tower with its high-level liquor tank, and the fermenting house.

© Reproduced by permission of Historic England Archive - Ref: BB71/10958

Education

Teacher's Kit



Oast house, Great Dixter, Northiam, East Sussex

The inside of an oast house, showing the hops being pressed. Hops are not the main ingredient in beer but more of a flavouring. For every 100 litres of beer produced only 100 grams of hops are used to flavour it. Hops came in to use in England with the emigration of Flemish weavers and Dutch brewers. Before this time English 'beer', made without hops was known as ale and any 'beer' made by immigrant brewers using hops was called beer.

© Crown copyright. Historic England Archive - Ref: BB95/08505

Education

Teacher's Kit



Mash tun at Hook Norton Brewery, Hook Norton, Oxfordshire

The mash tun where malted barley is mixed with hot water to create a fermentable liquid. Hook Norton Brewery was built in 1872. The Brewery still operates: its techniques are traditional, though the equipment is to modern specifications.

© Crown copyright. Historic England Archive - Ref: AA024782

Education

Teacher's Kit



Workington Brewery, Ladies Walk, Workington, Cumbria

The Workington Brewery company was founded by John Curwen in 1792. This nineteenth century indicator shows the quantity of fluid held in the (mash) tun, by means of a chain, seen at the top of the indicator, which is linked to a weighing machine system. In order to keep the quality of the beer consistent it is important to know exactly what quantities of each ingredient are being added to the brew.

© Crown copyright. Historic England Archive - Ref: AA93/04746

Education

Teacher's Kit



Copper in Brakspear's Brewery, Henley-on-Thames, Oxfordshire

Now famous for its regatta, Henley was at one time renowned for its malhouses and breweries. The Brakspear brewery was founded in 1779 and moved into New Street in 1812. The copper is a vat in which malted barley and hops are boiled together during the brewing process.

© Crown copyright. Historic England Archive - Ref: AA024782

Education

Teacher's Kit



Cask Drop, Fremlins Brewery, Faversham, Kent

A brewery was founded on this site in the eighteenth century, but all of the buildings still in existence by the time it was demolished in 1995 are Victorian. This picture shows the cask drop where barrels were rolled into the underground storage areas from the floor above where they were filled.

© Crown copyright. Historic England Archive - Ref: BB95/08505

Education

Teacher's Kit



Cooperage, Springfield Brewery, Wolverhampton, West Midlands

The art of making barrels for storing liquids dates back to the Iron Age people of Europe. In this brewery a section is set aside for making and filling barrels with beer. In the background is the one of the cooling chimneys for the brewery. This brewery was built in 1873, for William Butler, as a self-contained site with maltings, brewhouse, stables and offices.

© Crown copyright. Historic England Archive - Ref: BB91/17897

Education

Teacher's Kit



Brewers dray, Saracens Head, St Margarets Plain, Ipswich, Suffolk

Brewers were often local firms and supplied public houses within a small radius. Drays were well adapted working vehicles, and two horses could pull ten or 12 barrels.

© Historic England Archive - Ref: AA98/12167

Education

Teacher's Kit

Images – The Brewing Industry



Ushers Brewery, Trowbridge, Wiltshire

Pictured is a selection of the produce brewed by, or under licence, for the Ushers Brewery. The brewery was established in 1824 and built a considerable reputation, especially in the South West of England and South Wales. Their well known 'Best Bitter' and 'Founders Strong Ale' are among those shown.

© Historic England Archive - Ref: AA017271

Education

Teacher's Kit



Brewhouse, Ashby Hall, Ashby St Mary, Norfolk

Before reliable sources of drinking water were available, many country houses brewed their own beer as the normal drink for their large staff. The ready availability of cheap beer and other bottled drinks in the late 19th century led many country houses to stop their private brewing activities.

© Historic England Archive - Ref: BB98/27256