

English Pale Ales

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English Pale Ale (“Pale Ale” from now on) is a group of beer styles that has evolved over several hundred years into the beers that we know of today as bottled or kegged versions of Real Ale cask beers. Beer Judge Certification Program (BJCP) breaks Pale Ale into three sub-styles: Ordinary (Standard) Bitter, Special (Best, Premium) Bitter, and Extra Special (ESB, Strong) Bitter. Pale Ale has historically also included India Pale Ale, but BJCP has a complete group of sub-styles for IPAs.

Pale Ale was made in England as early as 1630, along with the more common brown ales. Pale Ale became more popular in the early 1800s as Hodgson produced and exported a highly hopped Pale Ale (IPA) to India – the extra hops helped the beer in wood casks survive the long and hot voyage to India by boat. Regular Pale Ales continued to gain popularity in the 1820s, and grew more in the 1840s as inexpensive glass bottles were introduced. The visual factors of ale became more important – customers were demanding clear (not murky) beer. To aid in clearing the beer, brewers started fining casks with isinglass.

The “Burton” style (e.g. Bass) comes from the town of Burton on the Trent River, and uses water with a high mineral content. Bass took out the very first British trademark in 1890 for its Pale Ale bottle label.

All three Pale Ale sub-styles are very similar. The main differences are that the original gravity increases (as does the alcohol) as we move up the line, and the maltiness and bitterness also increase. Here are the specifications from BJCP (2004):

Ordinary Bitter	1.032 – 1.040 OG	3.2 – 3.8% ABV	25-35 IBU
Special Bitter	1.040 – 1.048 OG	3.8 – 4.6% ABV	25-40 IBU
ESB	1.048 – 1.060+ OG	4.6 – 6.2% ABV	30-50+ IBU

The hop (historically) is Goldings (from East Kent), and emphasis is on bittering with a low hop aroma. If there is hop aroma (particularly in ESB), it should be clean and crisp (fresh hops, not a “coarse” variety like Cluster) – Goldings provides a light floral note. Other hops may be used for aroma, if desired – typically other UK varieties like Fuggles.

The malt is often “Pale Ale malt” which is kilned to a higher temperature than regular light malt (e.g. Pilsner) producing more color (typically an amber colored beer). Pale Ale was called “pale” because it was much lighter than the other beers of the day (stouts and porters). The malt is also typically highly modified (more conversion is done at the malting stage) so that a single-step infusion mash process can be used (no protein rest, no decoction). Pale Ale typically has some malt aroma, often with caramel notes. ESB has a higher malt aroma and flavor. Mashing is normally done at 150° or

less to give the beta amylase a chance to break down most of the unfermentable dextrins, resulting in a well attenuated beer.

Water for Pale Ale is traditionally high in sulfates, as well as calcium, magnesium, sodium, and chloride ions. The sulfates enhance the hops bittering by making the beer appear drier. Calcium helps in buffering the pH, and magnesium is essential for healthy yeast growth. To homebrew a Pale Ale, most brewers need to add minerals to their water – usually by adding gypsum (which is calcium sulfate) – which is called “Burtonizing” the water. Burton water is up to 1200 ppm of mineral hardness, but some of it is bicarbonates which are “temporary hardness” and can be removed by boiling and decanting.

Several different types of yeast have been used over the years. Fermentation is typically done at relatively high temperatures (for the yeast) of 60-65° which produces some fruitiness from esters. Special brewing systems were developed to deal with different types of yeast. The Burton Union is used to help dusty yeasts settle out to make a clear beer. The Yorkshire Stone Squares did the opposite for highly flocculent yeasts – they continuously rouse the beer to insure that the fermentation completes to produce a higher attenuation.

Until 1800, the Inland Revenue permitted only malt and hops in beer (similar to the German Reinheitsgebot). Several laws in the 1800s allowed sugars and other cereal adjuncts, so modern Pale Ale may have 10-15% of cereals like corn or wheat, as well as 5-10% sugar.

When Pale Ale is served, the carbonation level is typically low, and draught Pale Ale (“Real Ale”) is drawn from a beer engine (“hand pump”) – with only natural carbonation, and no CO₂ pressure added to carbonate or push the beer. Bottled versions typically have a higher carbonation. CAMRA is a group that promotes cask Real Ale, since the increased carbonation from kegged or bottled beers tends to mask the crisp hoppiness which is the primary feature of the Pale Ale style.

Sample beers:

Ordinary Bitter	(none available)
Special Bitter	Fullers London Pride (4.7% abv)
ESB	Morland Old Speckled Hen (5.2% abv)
	Whitbread Pale Ale (Styrian Golding hops, 5.7% abv, contract brewed for Royal Imports (Boston Beer in Cincinnati, OH))
	Bass Pale Ale (5.0% abv)
	Fullers ESB (5.9% abv)
Other	Boddingtons Pub Ale
	(creaminess is widget used to simulate “hand pulled”, 4.8% abv)