

# HERITAGE BREWING PRIMER





This is not meant to be a “how to” or even to cover every aspect of brewing heritage beers. This is meant to be a starting point.

An explanation of what was different, and why it was. And to give enough knowledge to go off and learn more about the aspects that you are interested in, or to think about how to take techniques you already know in a different direction.

For more information on recipes, read Ron Pattinson’s blog “Shut Up About Barclay Perkins” as it’s the definitive source of thoughts and musings on how recipes changed over the years. If you like it, buy his books, they’re very good.

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Beer Nouveau



# A BIT OF BACKGROUND

To look at the comparisons between modern and heritage brewing we need to look at the full life cycle of the beer until it reaches the drinker. In general I use the terms Historic, Heritage, Traditional and Modern when it comes to the eras of brewing. They're a bit loose but Historic is before we started writing things down, around the late 1700s (which is also when we first started properly using hops), Heritage is from then until the start of the First World War. Traditional goes until the late 1990's/early 2000's and then modern takes over. It all really depends on the country, the brewery and the drinker. But it's a good rough guide.

With that in mind, modern brewing is: mash, boil, ferment, condition and package. However heritage brewing is a little more complicated: mash, boil, primary fermenting, packaging, secondary fermenting and condition.

The heritage approach seems more complicated, but it's mostly just moving responsibility for the final stages of the beer away from the brewery and to the brewery owned pub with brewery trained staff. This resulted in the beer at the bar being much fresher than with modern brewing methods, and to understand why that is, we need to look at what's happening at each stage of the process and how they differ.

**The Mash** : At its simplest, the mash is where the alpha and beta amylase enzymes convert the starch to sugars.

Those sugars are either simple or complex depending on the conditions in the mash tun. Cold mash and you get simple sugars, hot mash and you get more complex sugars.

**The Boil** : During the boil hops impart their acids into the wort and we get bitterness into the beer, but any aroma oils get boiled off.

Add hops at the end of a boil or whirlpool and you get very little bitterness, but those aroma oils aren't boiled off.

**Fermentation** : During fermentation the yeast converts the simple sugars to alcohol and carbon dioxide but is generally too lazy to convert the complex sugars. So those complex sugars remain in the beer, thickening the body and balancing out any bitterness from the hops.

Dry hopping can be done post fermentation (that's where the "dry" comes from, once fermentation has removed the sugars the beer is no longer "sweet" but "dry" so it's dry hopping) to get more aroma oils into the beer without any additional bitterness.

The balance between remaining sugars and bitterness is known as the Bitterness Ratio. This changes over time as the hops "fade" resulting in the bitterness mellowing, leaving a sweeter beer.

That's modern brewing anyway. Heritage brewing is a little more complicated.

# The Mash

Firstly, malts a hundred years ago were nothing like the ones available now. And not just because of the malting practices.

The varieties of grain that were grown were a lot taller, if you get a chance to go on a Crisp Maltings open day make sure you take it. You can get to walk through the grain fields nearby and see the different varieties growing, including such ones as Chevallier. Heritage grains had a longer stem. The spike itself also has less glume (the individual grains) on it. By modern standards this gives a comparatively really bad yield and is seen as a waste of field space. However farmers are now starting to realise that a crop with deeper roots actually led to better soil and less flooding of the fields. But that's another story. With less grains on each stem though, the flavour was more concentrated. These 2 row barleys had about half the overall flavour of the modern 6 row ones, but it was only spread out throughout those two rows of grain, whereas the modern varieties have it spread out over the 6 rows. So they were more intense, even if you got less of them. And the longer stem itself wasn't a waste product but a commercial product used for thatch and animal (and people) bedding, as well as for fuel, Barony Mills is a watermill on Orkney uses the straw and husks from the barley that it grinds for flour to fire its kiln for the proportion of barley that it malts.

But people's tastes in beer were changing, darker beers were becoming popular (don't believe the myth that beer used to be dark before modern malting practices), and if you add just 5% of a dark malt to your overall grain bill the intensity of flavour in your base malt doesn't really matter, you won't taste it over the roasted malts. So farming - and to an extent malting - became all about yield. It wasn't until Maris Otter (also a 2 row barley) was introduced in 1966 that people started looking at the malt flavour again as the paler ales (by this time we're on about a sort of ruby colour) became a bit more popular. But the larger breweries didn't like it for various reasons, consistency being one, accountants being another as it was sold as a premium malt, so it wasn't until the mid 90s when it started being marketed as a premium malt that its popularity began to rise.

These older malts may have had much more flavour than modern ones, but they were really, really bad for enzyme content.

And it's that enzyme content we need to convert all those starches to sugars in the mash tun.

Although in heritage brewing we don't, which I'll cover a bit later.

If the malts were especially bad though, there were a few little tricks that brewers could do, the easiest being Mash Hopping.

This is a process that's rediscovered every ten years or so, where hops are added to the grains in the mash tun. Brewers (and I included myself in that until recent years) had never really figured out the point of it though as you're not getting any of the oils from the hops, and hardly any of the bitterness comes through because the mash isn't hot enough to get those acids out.

But there's something else that happens here, hops have amylase enzymes, same as the malt. Adding hops to the mash was a heritage brewing equivalent to adding a sack of Weyermann's Pilsner or other high enzyme content malt or a bottle of glucoamylase enzymes. It boosted the enzymatic power of the mash and helped with conversion of those starches to sugars.

Knowledge of this process is very important when it comes to understanding heritage brewing, especially when it comes to using wood casks.

The downside to mash hopping, however, was that if the hops were added directly to the mash tun, the grain couldn't then be sold on for flour or animal feed; hops are poisonous to most animals. There were other techniques that could be used for mash hopping though, mostly involving a secondary, smaller mash tun or recirculating the mash liquor through a hop back.

Other methods used to increase extraction of sugars were stepped mashing and decoction mashing.

These are two quite simple, and quite similar mashing techniques that have generally been abandoned by modern brewing as they require extra equipment and more time, and with modern modified malts it's generally seen to not be worth the extra effort and cost.

Stepped mashing, at its most simple as the process of raising the mash temperature in stages, with a protein rest at each stage to help with the propagation of the different enzymes in the malts and to give them the best possible chance of converting all the starches possible.

There are different ways to achieve this, some equipment is set up so that the mash tun has an element in it, away from the grain, that can be turned on until the mash has increased in temperature at each stage. Other methods involve removing a portion of the wort and heating it separately before mixing it back into the mash. Removing the wort to heat separately allows a brewer to control additional elements that they might want such as caramelising the wort with a high temperature vigorous boil to introduce those sweet caramel flavours, as well as darkening the end beer. It's important to note that by removing the wort and boiling it there is an additional loss due to evaporation and without careful planning it's difficult to achieve the target gravities.

Decoction mashing is similar to that second stepped mash method, but it's not just the wort that is removed, but a proportion of the entire mash; wort and grain. This is then heated or boiled separately before being returned to the main mash.

By controlling a stepped mash, which decoction is a variety of, it's possible for a brewer to control the thickness of the end beer. Gentle heating the mash or wort will result in more simple sugars that the yeast will convert, giving a thinner bodied beer. Whereas vigorously boiling the wort or mash will give more complex sugars resulting in a thicker bodied beer.



# The Boil

On to the boil, and even that was different with heritage brewing. For a start, lots more hops. And again, it's not until you accurately recreate these beers that you start to see why. And why it changed, which was again down to yield.

If you brew in a 10bbl kit, roughly 2,000 litres, then you're never brewing 2,000 litres at a time. That's the volume to the brim of the vessel. At best you can put about 1,800 litres in there to allow for the rolling boil.

But then you also need to allow space for the hops.

With a traditional to modern recipe you may be looking at adding 5kg to 10kg of hops, which causes up to 100 litres of wort lost to absorption as well as the space for the hops themselves, so about 150 litres could be lost to hops. Giving you a brew length of 1,650 litres.

With a heritage recipe using just hops like Goldings and Fuggle, you'd be using up to 20kg of hops, so losing 300 litres, leaving you with a brew length of 1,500 litres at the most.

The cost of production, and the time to brew both those batches is the same. A brew day is a brew day, is a brew day. Except for when you get a stuck mash and then they suck.

So brewers moved towards using higher alpha hops to get the same amount of bitterness whilst using less hops themselves. This meant that they could produce more beer with each brew. However, as with all ideas brought in by the accountants, this had a side effect - a shorter shelf life.

This was quite a modern thing really when it started to become a problem because at first the alpha differences weren't that bad.

Goldings is 4 - 6%, Challenger 6.5 - 9%, First Gold 6.5 - 10%. Even Cascade is only 4.5 - 8.9%. So it wasn't really noticeable, and it gave the bittering that people were after without using that much less hops.

It wasn't until modern craft beer that the problem really started to showcase itself. Citra 10 - 15%, Amarillo 8 - 11%, Mosaic 11.5 - 13.5%.

But why was this a problem for shelf life? One of the major differences between heritage, traditional and modern brewing is how hops are used, not the process but the reasons. With modern brewing hops are there for the aroma. It's all about the aroma. But the aroma gained through dry hopping doesn't last, rather it fades. "Drink Fresh" became a thing, because you had to if you wanted any chance of smelling those hops. And the beer had to be kept cold to keep those oils in, even to the point of some breweries refusing refunds on bad beer because it wasn't carried home from the brewery in cool bags surrounded by ice.

There's a myth that this wasn't a problem for heritage brewing because those beers didn't have any hoppy aroma. Yes, that's a myth. They had the same hoppy aromas (albeit not quite as in your face), but they didn't fade. And that was down to how the beer was brewed, not the hops that were used.

If you add the hops on the cold side post fermentation, you're just steeping them and the oils seep in but don't stabilise as part of the beer. However, if you add them during the boil then the oils isomerise with the wort and become stable.

But what about the oils boiling off? That's where the lots and lots of hops that are used come in.

During a rolling boil all the hops are on the surface or within the wort and the surface is "clear", and the steam containing the oils is able to evaporate away. However, if it's not quite a rolling boil and there are a lot of hops there, the oils are brought out of the hops, but they can't escape in evaporation because of the thick "cake" of hop cones sitting on the top of the wort. So the oils go back down into the wort due to convection and isomerise, becoming a stable part of the beer. When the bottom of that hop cake layer does roll in the boil, the top part goes down and the bottom goes to the top, but the sheer quantity of hops used means that there is still a hop cake sitting there blocking the oils from evaporating away.

When we look at the effects of that lower temperature, longer boil, the first addition hops weren't there for bittering. They were the aroma hops. This is why Fuggle was such a great hop when used as a first addition in a lot of brews, it's aroma (remember, you have to use a lot of it!) is pure mango and stone fruits, and hops like East Kent or Whitbred Variety Goldings added later as the flavour addition to bring a nice peppery spice flavour that then sits underneath.

When we then compare the different methods of hops additions we can see that modern brewing is a bit about face.

Modern brewing: Bittering hops - Flavour hops - Aroma hops  
Heritage brewing: Aroma hops - Flavour/Bittering hops

# Fermentation

This is where it gets funky - literally.

As mentioned, fermentation is where the yeast converts the simple sugars to alcohol and carbon dioxide. And with modern brewing there is the much hated hop creep. In heritage brewing though hop creep was sought after, even at times both needed and planned for.

Before we get onto hop creep and packaging the beer, it's worth looking at some of the specialist fermentation systems.

The Burton Unions method is a lot simpler than its network of pipes and interconnected barrels makes it look. In its complexity the Burton Union System feeds freshly fermenting wort from a primary fermenter into an open trough positioned above the arrangement of barrels and pipes. The wort then feeds down the pipes to fill these barrels. As fermentation continues the excess healthy yeast is pushed up through more pipes and into the top trough, leaving a cleaner fermentation to continue in the barrels. This healthy yeast is easily collected from the top trough to be used in other brews, and when fermentation is finished the clearer beer is drained out the bottom of the system for packaging.

A simpler but comparable method is that of the Yorkshire Squares, which is a single (square) fermenting vessel that had a lid with a hole in the top. The excess yeast would froth through this hole and run off into troughs to be collected for reuse.

Homebrewers know this as the Blow Off Method, and stick a pipe in the top of their fermenters leading to a separate container that collects the yeast ready to be discarded.

Something that a lot of people seem to forget is that a lot of beer brewed in the UK was blended, through a technique known as Parti-Gyling.

Ask (almost) any modern brewer and they'll tell you that parti-gyling is brewing a strong beer, and then reusing the mash with fresh liquor to get the last of the sugars and flavours out for a weaker beer. But rather than splitting a group into single units, parti-gyling was exactly the opposite. Putting lots of single units into a larger unit. Which shows how many parties modern brewers have been to.

Once fermentation of multiple gyles (individual brews) was finished, they were blended together to provide a more consistent beer.

Modern beer is packaged into airtight containers, casks which are not pressure containers and will pop their shives if the beer ferments too much in them, and kegs which are pressure containers and will hold a lot more carbonation.

It's important to note that we're talking about fermentation, not conditioning. They are historically two separate things that only recently got mixed together and then mixed up in modern process and terminology.

Heritage brewing, however, didn't use airtight containers, it used wooden casks..A lot of brewers worry about oxidation (even micro-oxidation) as air seeps into these casks, affecting the beer inside it. That is very much a modern worry brought on in part by the German practice of lining the inside of wooden casks with pitch. It wasn't really a worry for English brewers as unlike the continental lagers of the time, English ales weren't usually in the casks for as long.

It's important to remember too that it's not just alcohol that the yeast is producing, it's CO<sub>2</sub>. And a controlled secondary fermentation in a wooden cask can produce CO<sub>2</sub> at the same rate that it

seeps out through the wood. Using different types of wood, with their different hardness, could also allow a cooper to control the rate at which that CO<sub>2</sub> was able to escape. Secondary fermentation was used to keep the beer fresh in the cask and to “polish it” until it was ready to be served.

So, where does hop creep come in? To understand its significance and effect we need to look at cask sizes and their uses.

Pin, Firkin, Kilderkin, Barrel, Hogshead.  
20 litres, 40 litres, 80 litres, 160 litres, 320 litres.

Roughly.

Each cask doubled in size to the next level. Or rather, the volume of each cask doubled. The actual surface area of wood inside the cask that was in contact with the beer didn't double. The smaller casks had a higher surface to volume ratio than the larger ones, and this really matters when we look at what's going on inside the cask at this point, the “polishing”.

Smaller casks were generally only used for serving beer. Firkins themselves were usually the smallest you'd see, mostly it would be barrels. These would be delivered to the pubs and stored in the cellar until needed. Some landlords would then draw from these barrels into firkins to put on the bars, or bring jugs up as and when needed. But with the advent of hand pulls (which were around in the late 1800s but not really common until the early 1900s) they'd just get hooked to the barrels directly.

This all meant that conditioning wasn't done at the brewery in tanks, but in those casks. And the beer would have to hold up to that and given those differences in brewing techniques, it could.

Now, yeast is hard to kill. And if you didn't have a filter at the brewery the beer would have residual yeast in it.

When we look at a lot of the old recipes we get the impression that beer used to be sweet. They had final gravities of 1.015 and 1.020. But that wasn't the final gravity when the beer was served. That was the specific gravity when it left the brewery to go sit in a pub cellar for a month or two. That residual sugar was the food for the yeast still in the beer to slowly keep working and producing CO<sub>2</sub>. Pub cellars were naturally cold (they were also much, much bigger than ones in modern pubs) so a long, slow fermentation took place, building up a controlled pressure within the cask.

When the pressure inside the cask grows, it pushes beer into the wood. It helps if you think of the wood as a sort of a cross between a sponge and a filter. And if you look at it under a microscope it looks very similar to one. The pressure from this secondary fermentation pushes the beer into the wood, and the excess CO<sub>2</sub> then escapes out of the cask, the pressure inside drops and the beer seeps back out of the wood into the cask again. During this process any long protein strings or starches leftover get pulled into and kept in the fibrous wood itself, like a bi-directional filter.

With a larger cask and its lower volume to surface area ratio, that process takes longer. But that was fine as the larger casks were generally for keeping beer longer so the slower process, under pressure was suited.

Once the casks were vented, the pressure was released and stirred up the contents, disturbing the yeast, trub and sometimes hop leaves inside. This was when the conditioning then started. By rousing everything inside, the yeast was agitated and brought “back to life” so it could then get on with cleaning up after itself, removing all those esters and off flavours they produced.

And it was the cellar teams in the pubs that handled conditioning. They'd make sure that there was more than enough beer in the cellar, and would vent and condition it as they needed it. This way beer was a lot fresher and in far better condition than what we see now, but this process took a lot more space, a lot more time, and a lot of trained staff. To be able to send out beer from a brewery in this way today you'd have to be very confident in the pub that it was supplied to.

As for those hop leaves in the cask; this is where Hop Creep really comes into its own and why it's not a bad thing, just misunderstood.

When covering mash hopping we looked at how hops have amylase enzymes on them. When you add hop to a cask with active yeast, those enzymes will start to work breaking down any starches that weren't processed during the mash. That is then giving sugar to the residual yeast, which produces CO<sub>2</sub>. With traditional brewing the boil stage kills off all the enzymes so no further conversion takes place and you have a more stable beer. But with modern brewing and double dry hopping there's a risk that uncontrolled conversion will take place and cans will explode. That's why modern brewers hate hop creep.

But with a wood cask it can be used to make sure that the secondary fermentation continues for a longer period.

This was particularly used when making beers that would be shipped around the world. These weren't just IPAs, but East India Porters (which sold a lot more than the pale ales), Imperial Stouts to Russia and Shilling Ales to America. These beers all spent a fair while, between 12 and 24 months in barrels.

All these were mixed fermentation beers. *Saccharomyces* and *Brettanomyces*.

*Sacc* ferments at a warmer, steady pace. *Brett* at a wider temperature range, generally cooler, but much, much slower. It also takes much longer to get going and to clean up after itself.

The beers were fermented out with *Sacc*, usually down to 1.015 and then put into barrels which had *Brett* in the wood. All the barrels and hogsheads had *Brett* in them. The kilderkins and firkins probably did too. But because *Brett* takes a while to get going, it never had long enough to start affecting the beer, unless that was the plan. For the first month or so the *Sacc* would finish off the simple sugars in the beer and clean up after itself, and towards the end of that time the *Brett* would start coming to life and slowly start to munch through all the complex sugars that were brewed into the beer. A higher mash temperature would have ensured that there was enough complex sugar food for the *Brett* that the *Sacc* couldn't convert. After about a year sat in the brewer's yard the barrels were checked to make sure that the *Brett* was working, which also meant that *Sacc* had completely finished and died off - which was very important.

The casks would then have another handful or two of hops added to them before being resealed and shipped off. During their journeys those hop enzymes would get to work on the last of the starches at a slow rate to produce food to keep the *Brett* alive. If there was still active *Sacc*, it would eat through these new sugars quickly and the barrels would explode, which is why they took care to make sure that the *Sacc* was fully finished out.

Rather bizarrely, but almost certainly planned, the rate at which English hop enzymes convert starches to sugars in a barrel at ambient/cool temperatures is the same rate at which *Brett* converts those sugars to CO<sub>2</sub> to keep a consistent pressure within English Oak barrels. It's almost as though they knew what they were doing.

RECREATING  
HERITAGE BEERS

The first thing to look at when recreating heritage beers is the wood. It's more than a container, and arguably more than a processing aid. The impact that a wooden cask can have on the final beer can't be overrated.

So where does this leave you when both cleaning a wood cask, and with making a beer for one.

To start with, let's look at cleaning. Something I get asked a lot seeing as every book on wood in brewing I've read doesn't even cover it. Most modern text books that mention wood are all about buying in an ex-whisky barrel, using it once, and then selling it on for garden planters.

## Sealing Wood Casks

Before you can look at cleaning the cask, you need to make sure it's water tight.

The simple reason to do this before cleaning the cask is so that any cleaning method you employ doesn't just leak out.

Heat opens up the pores within the wood, so warm water is best to swell the cask, about 60 Celsius is ideal. You can use cold water, but that will take a lot longer. Any hotter and you risk cooking any of the residual flavours in the wood.

When full, seal the cask and leave it for a while to make sure that there aren't any slow leaks you're not initially aware of.

If you've repeated the soaking a few times and it's still seeping here and there, it's possible to gently knock the bands in from the ends slightly. Anything more than slightly, look into proper cooperage or repair.

Once you're happy that the cask is water tight, it's then time to look at cleaning it.

## Cleaning Wood Casks

Cleaning a wood cask is a lot easier than it first seems. Especially as you don't have to worry about cleaning any Brett out if you're not leaving the beer in there for longer than two months and will be packaging it into cask for quick sale. As mentioned with the hop creep and exploding cans, Brett can also cause an ongoing fermentation that you don't want in a pressurised container.

You can't use the same techniques as the wine or cider world as they introduce sulphur or char the cask. Charring a cask is a good way to get some of the deep flavours back into the wood after it has been used several times, but not necessarily what you want with a cask for beer.

Using sulphur really is a last resort as it introduces a flavour that is actively avoided, and can react to the beer itself during fermentation leaving taints that are very hard to get rid of, requiring multiple rinses. And if your cask has previously had spirits in it, you run the risk of setting fire to it.

Wood is semi-porous, and that process of secondary fermentation pushes beery crud into those pores, which you want to remove.

Using any chemicals will only push those chemicals into the pores, which will then leak back into the beer.

So you just need to rinse the cask out with hot water. A low power hot steam pressure washer is perfect, or just use a normal cask washer without adding any chemicals to it, just the hot water.

Then it's a case of opening up those pores, and a steam cleaner is perfect for that. Easiest and cheapest way is a wallpaper stripper. Take the flat end off so you've just got the pipe and stick that into the shive hole. The hot steam will open those pores up, then rinse it out with hot water again.

It may take a few times, but you'll get rid of the vast majority of nasties in the wood.

If that doesn't get rid of everything then it's a case of using a sodium percarbonate cleaner. These are usually sold under brand names such as OxiClean which are a hydrogen peroxide and sodium percarbonate mix. Use this method sparingly though, only when there's a noticeable mold or musty smell to the cask, as it will remove some of the flavours of the wood itself.

## Storing Wood Casks

The best way to store a wood cask is to keep it in use, however, this is far from practical.

If the cask is to be used again within a couple of months, it's perfectly fine to let it dry out, and then to re-swell it with hot water ready for use.

If it's a longer term storage than a solution of 1 teaspoon of citric acid and 2 teaspoons of sodium metabisulphite per gallon of hot water filling the cask will keep it clean for around six months. If you plan to keep the barrel empty for longer than six months you'll need to change this solution approximately every four months.



# The Beer

As for the beer...

That really depends on what you're looking to get out of it. It's important to remember that there's a huge difference between cask conditioned and barrel-aged, and the modern "shove the beer into a spirits cask and see what was left in there" method. Don't get me wrong, I absolutely love some of those.

But if you're doing a single pin or firkin, then you're looking at cask conditioning. You'll be looking at a beer that does its secondary fermentation in the cask itself. For this to be effective you need to be fully confident that the venue selling the beer is able to properly look after it. Whilst it's possible to do the secondary fermentation inside the cask in the brewery, it will get quite disturbed when transported to the venue and will need longer to settle than they may be used to.

There's a small problem here for a lot of breweries, if you open up the cask to add fresh finings just before you send it out to the venue you lose the conditioning and carbonation. If you add finings when you cask the beer, you're dropping the yeast out and stopping that secondary fermentation.

The only thing you can really do here is to make sure that the beer is as crystal clear as you can possibly make it before casking it, and use a highly flocculent yeast that will drop out like chewing gum so it doesn't get too disturbed when it's sent over and racked. It also helps if you can take it there and rack it yourself so that you can keep it upright and not rolled along the floor. One of the downsides of modern cellaring is that the beer doesn't get the time it needs to naturally drop bright.

Before even starting on the recipe, I'd really recommend seeing if you can get the cask to your brewery and clean it. During that steaming process you get the aromas of what the cask itself will bring to the beer. Some casks bring vanilla notes, others a spiciness, some a soft leather note. As the beer ferments and conditions in the cask, those flavours and aromas from the wood will seem into the beer as the beer is forced into, and then out of the wood itself. You may also get some pseudo-tannins, these are phenolic acids and can add a "dryness" to the beer. Usually when people say "oh, you can taste the wood" this is what they're tasting. These flavours will be in the beer, so it's wise to develop the recipe to match or compliment these.

Next there's the ingredients to look at: malt, hops and yeast.

I've already mentioned how heritage grains are totally different in flavour from modern ones. So if you're looking to try and accurately recreate a heritage beer, then do try to make sure that you can get the same grains that they used. It's very unlikely that the barley will be malted in the same way that they were in the past, but you will at least get a lot of the flavour coming through. If you can't get the heritage grains, or want to try and mimic a more accurate malting recreation, then mixing in a small amount of medium crystal and a little bit of amber will go a long way. You only need about 3-5% of each, and try to use a grain like Maris Otter that also has a malt forward flavour. Of course depending on the sort of beer you want to brew you can just ignore that and use something really light that will see the wood come through, although it's worth bearing in mind that if the wood flavours come through too much the beer ends up tasting like licking a plank.

Hops are the same, you can either go with accurate recreations, or try something modern. You can't go wrong with Goldings (and Fuggles is a variety of Goldings!) in a heritage beer, the light spiciness in the hop works really well with the tannins in the wood. But there's nothing to say you can't use new world high alpha hops, just be aware of how the hops react and may fade, as well as the amount of acids that you're putting into the beer.

And then there's yeast, to Brett or not to Brett. That question is quite easily answered. If you're planning on releasing the beer within a year of brewing it, don't Brett it. It takes time for the yeast to both ferment and to clean up after itself. But there's generally nothing stopping you from brewing what you want. If you want traditional then Nottingham or S-04 is a good allrounder, if you want something modern then just make sure to think about how the yeast will work in the cask, and how quickly it will drop out.

So what do I recommend? Personally I like to keep it old school, but don't make it weak. Weak beer just doesn't really work in a wood cask. Pure Chevallier malt, Fuggles at the start of the boil, Goldings at the end. Nottingham yeast and then a small handful of Fuggles in the cask. But that's just me.



