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TECH 1-82

THE ENGLISH BREWPUB
AND THE RESURGENCE OF THE SMALL, LOCAL BREWERY
IN ENGLAND AND AMERICA

by
DAVID BRUCE

You homebrewers seem to know an awful lot more about technical, scientific aspects of brewing than a commercial brewer like myself. However, I do not want too many technical questions because I would like to come and ask you some. Having listened to the lectures this morning, I think that Weed (Louise, my wife) who is sitting over there, is probably cringing listening to me. I have created five brewpubs over the last three years. We have only been doing it for three years, so if any of you are thinking of starting your own brewery then do so because you can have five in less than three years if you are lucky. I think we are very much a mixture between Ken Grossman and Joe Kortuem, both of whose presentations I thoroughly enjoyed this morning. We are a mixture between 6 gallons a month and 10 barrels a month, but I'll tell you about that. The concept of pub breweries is slightly complex, and I would like to initially give you a bit of a spiel, regrettably, about myself and how I ended up getting into it. I'll also discuss the trends in England of brewing licenses and how they decreased tremendously over the last 100 years and then, suddenly, in the last 5 years there has been this great resurgence. With a little bit of what I call boring history, which I shall try and skip through as quickly as possible, especially the bit about myself, I would like to describe how this brewpub concept has developed with us. I think, and I hope it will become apparent that there is more to a brewpub than just a brewery. Without the brewery, the pub wouldn't work. I am going to show you photos of pubs before and after, so you should get a complete insight.

The first thing about me is that I am very conscious about having spoken to so many of you with all your enthusiasm and intelligent questions. I want to make absolutely clear to you that homebrew is a craft far more than it is a science. It is quite interesting, and I will talk later about my appalling academic qualifications, which is perhaps one of the reasons why I started my own brewery; I couldn't persuade anybody else to try me. My personal experience for 12 years before starting my own brewery was that I left school and failed to get to university. The only thing I could do without math "O" level, which is our minimum academic arithmetic qualification, was to join a brewery. I joined a brewery instead of a petrol company because I thought I would prefer pubs and breweries to petrol stations and oil refineries, and so that is the only reason I got into pubs and brewing. But I did do 6 years production with Courage's, one of the, shall I say, nasty "Big Six" in Britain, and then three years with Theakston's Brewery, where they brewed 40 barrels at a time. I then got involved with Bass Charington, regrettably another of the national breweries in Britain, and learned all about running their seedier side of life, their sort of nightclub, disco-entertainment pubs. Ironically, 6 years previously I was the area manager for Charington and had to go around and interview the strippers and measure up the topless go-go girls, as well as sort out

Saturday night contracts, so one had to be fairly versatile. I hope you now have got the impression that it is a fairly odd animal that ended up with what some people rudely call the "Firkin Empire."

Now here is something slightly less boring which is just to put it into perspective: how the licenses to brew beer have decreased so dramatically in the U.K. I don't know if any of you have taken any notes. I don't recommend it when you hear what I have to say. It is interesting and I am slightly apprehensive with Michael Jackson here because he really is the greatest statistician. Roughly, brewing licenses in the U.K. were about 40,000 or so in 1840. In 1920 there were 2,900. So a tremendous decrease occurred towards the end of the 19th century. In 1940 there were only 800. In 1960, sadly, only 300 or so. Then in 1970, this is the incredible thing, only 176 licenses to brew beer. I got most of this information out of zymurgy, you will be pleased to know. When little old England had only 4 million people in about 1700, there were 20,000 brewery/pubs. In 1880 this, quite rightly, dropped to about 12,000. Here is the interesting statistic. In the next 90 years that 12,000 had dropped to 5. The reason this happened is that the little pub breweries were taken over by the guys who said, "This is silly to have half a dozen breweries, each brewing their own beer. Why don't we buy a wagon, build ourselves a bigger brewery, and we'll distribute." In fact what happened is that during the '60s the big breweries in the U.K. bought up lots of the little regional and independent ones. Between 1960 and 1970, just a ten year, highly volatile period, the big brewers had nearly 16,000 pubs due to mergers and takeovers during the next ten years. Then that figure had risen to that same six breweries owning 39,500 pubs. When I say "owning," I do mean owning. They are called "tied." I think you call it anti-trust over here. Well this is a classic example of anti-trust in that there is no choice -- if it is a Watney's Pub, a Watney's Brewery/Pub (and there are 8,500 of them in the U.K.) you can only drink Watney's beer and ale in them. In a Bass Charrington Pub (there are 6-7,000 of them), you can only drink Bass Charrington products. So we have this tied-house system. The brewers thought it would be good to start nationalizing their products, and they started producing keg beer, which as you well know, is carbonated, filtered, filled and pasteurized. This was promoted heavily in the press and throughout all media advertising, and during the '60s, traditional English ale, which is what these pub breweries and the little independents started in the last few years, was being squeezed out.

And then came the Campaign for Real Ale (CAMRA). That started in the early '70s because there was a strongly motivated group of beer consumers who went into pubs and said, "Look, we cannot now get traditionally brewed beer. It's this fizzy keg stuff." And what then turned out to be the most incredible consumer movement developed, and CAMRA has succeeded in completely reversing the production and marketing trends of the national brewer, short of the 30 percent U.K. drinking market that is now lager. It is interesting to note that half the pubs in Britain now sell real ale -- a figure twice what it was 10 years ago. In the last 5 years, 10 little pub/breweries started and in the last year or so about another 10, so it is really catching on. In the case of what I call home selling breweries, i.e. pub/breweries that brew their own beer and have a wagon that distributes to the free trade, about 100 new licenses have been issued. However, we are pub/brewers, and that is quite

a difference. We only allow our beer to be sold on the premises, so I think it is better if I stick to pub/breweries. As the brewers got bigger and bigger and took over more and more of other people's pubs, they decided that they had too many pubs, luckily for us. Three or 4 years ago they started to sell off what the big brewers called uneconomical tied-houses.

Now to put it in perspective. It is virtually impossible to get an outlet to sell beer as a free house in England, particularly in London. The interesting thing is that it was only when the big brewers decided to start selling off their "dust pubs" in what they considered to be lousy areas, that we happened to start off our little keg and pub. In fact, one of the first things that started us off was the fact that Truman's, part of the Grand Metropolitan, had decided that down in what they considered the wrong end of London, Elephant and Castle, underneath the railway arch, they had about 7 licensees in three years, declining barrellage, and they said, "Let's sell a pub." At that stage, after my experiences which I was telling you about, I had been in fact very frustrated working for the big brewers, and my wife Louise, said, "Look, I can't stand you coming home complaining every night. Why don't you go on the dole (or the welfare here)?" I was in fact unemployed for 8 months while looking for something to start my own business, so at least I didn't have to go home at night and complain about the boss. After about 6 months on the dole, I found a pub called The Duke of York. It was quite a disaster and all boarded up. I do a lot of running and one day saw this pub. I ran past it thinking, "Who would be interested in a place like that?" After 2 months on the dole I started to think, "I've got to start doing something, my morale is getting hurt," so I went in and saw this attractive big brewery-style bar. I am a fairly cynical character, but I make no apologies, and as you can see (from the slides), we had one or two problems with the floor because there wasn't any. I think big breweries put carpet over that! One of the reasons our ideas worked is because I didn't just sit behind a big mahogany desk and say, "I am going to make a fortune out of the real ale revival in England." It was to get myself off the dole!

So I went down into this stuffy old cellar and thought, "Good Lord, if I can dig up my old production notes from Courage and Theakston's, why don't I start my own brewery?" I thought, let's take it and do something quite original and start our own little pub/brewery. And in fact, that did become the first brewery pub to be started in England during this century. There were still five left which had been brewing right through from the end of the 19th century, but we did the first one in London, the first started in the country. It happened by luck, it was no shrewdness on my part. Quite interestingly, I then gave a little consideration to the planning aspects and rang up various local authorities. One put the phone down and said, "Ring back later when you are sober." When I said that I wanted to start a brewery they didn't believe it. Their only experience of breweries were places like Courage and Watney's up the road. The interesting thing, and I have been following all the research that has been going on over here into the planning, zoning and manufacturing and retailing of beer on premises, is that in the U.K., as long as you have a license to sell the beer, the planning authorities say that you can brew it there as well because it is ancillary to the existing use of the licensed premises. I then had to go along to the local employment officer and tell him what I was going to do, and he said, "How

many jobs are you going to create?" The structure is very keen on job creation at the moment with 3 million unemployed, and I said, "Well I will be creating one for myself anyway." We now have 150 employees on the payroll, which is our little effort towards the unemployment crisis. There was this one chap I was required to meet. He is called Mr. Hole, and he is from the drainage department of the trade office (this is all a true story). He still comes in once a month with a little pH meter and measures my yeast skimmings and things that go down the drain, so I have to behave myself, otherwise I'd fall foul of him. The next people to ring up, of course, were her Majesty's customs and excise. I got a pretty odd reaction from them. It took them about two months to come back, because when I said I was going to do about 20 barrels a week, that seemed to cause more problems than if I had said I was going to 100,000 barrels a year. In the end they said as long as you comply in every way with all the legal rigamarole and procedures that the big brewers do, then you can have your brewing license. This, of course, was unprecedented. Everybody is now starting to brew on the premises in England, but we tried to create a few precedences. The other thing is that at that time there were only one or two excise officers who had experience with small breweries. It is quite interesting that he asked me if we had any problems, and I said, "yes, we sometimes get wild yeast." The guy suddenly started talking about wild geese! He said, "Yeah, we got some of those in the back yard and they make such a mess." Anyway, once we got over our few difficulties, we understood each other a lot better.

The other important thing for you to realize is that if you are going to start a pub/brewery it can be done with other people's money. Louise and I were, and indeed are now, because we plant back our profits, completely stint. That means broke in my language. We had to borrow money so we went to the bank manager and borrowed £10,000 secured against the house so if the business failed the house would have to go. The interesting thing is that most of the really big brewers who contributed so very much to my motivation said OK we have given up one of our pubs, you can have it as a free house. Brew your own beer, but if you would like to sell our lagers, for which we are building our great big motorway megakegeries, we'll give you £10,000. So there we were taking a pub off a big brewer, getting £10,000 off the brewer. That was our £20,000 of borrowed money. It was a slight embarrassment to hear that someone did see an article in the London Financial Times that said we should be turning \$4 million during our third year. Just remember that \$4 million has been generated out of other people's money, not ours at all. So there again, we were very lucky. When I shopped around to find rates for money from the bank I produced quite a detailed feasibility study, and I sent this study not only to one of the top brewery analysts, but I also sent it round to one or two of my friends working for Bass Charrington, Watney's and Whitbread's. It came back from the brewery analyst with the comment, "This man needs his head seen to. This project has absolutely no chance of succeeding." Dogmatic. I keep those little things. I should have brought a photocopy. Anyway, that is what the experts said. The big brewers said you are absolutely joking. That went out years ago. It will not work. They only told me this after we had spent 10,000 quid. They didn't tell me before we started spending.

Getting back to the concept, I still don't know why this unusual concept of a brewpub works. Perhaps it has something to do with the decor. Our pubs

are generally different from a normal pub. We don't have droopy red lampshades, green dralon bottom back bunkhead seating. We don't have carpets, we don't have fruit machines, we don't have space invaders or jukeboxes. Did you know that 30 percent of the profits in a house in the U.K. doesn't come from selling beer or food? It comes from machines. That is incredible. So we had to break a few rules on that sort of thing. For our standard of decor we don't employ architects. I have nothing against architects, but I can't afford their fees on top of other project costs, so what I do is go along with Louise. I say, "What are we going to put over there?" and she says, "How about a few fermenting vessels over there?" It sort of fits together like that. In fact the managing director of Allied Breweries, who is quite a senior fellow in the brewing industry, thinks that our pubs work because of a professional standard of amateurism. Our first built brewpub is only about 900 square feet; the trading area, that is. It is doing a quarter of a million to £300,000 a year, so our span per square foot is considerably higher than the national brewers, dare I say it again. We filled in the floorboards, the wood, brass and glass, had a few plants hanging around. The slide shows the goose drinking from the firkin, which as you know holds nine imperial gallons of our beer. In this slide the ever-present goose overlooks our little bar. The whole thing, as I say, took about £20,000 of these other people's money. We spent about £25,000 doing it out, and by the time the bills came in, luckily, we had put a couple of weeks takings in the bank so we could just about stay afloat. But we are what economists call a highly geared company. Our very first brew house measures 8 by 12 feet and produces 20 barrels a week. We started off, in fact, only producing two hogsheads, which is 108 gallons a week. It was an untried idea. Everybody said it wouldn't work. I am a fairly cautious fellow, so we just put in a couple of 54-gallon fermenters. We used malt extract here. The hop section of that in fact contains a hop basket. We fill the copper and sugar dissolving vessel about 2/3 full of water then tip in four cans of malt -- Munton and Fison, you will be pleased to note. I hope I get a little discount for that bit of plug. We then add some demerara sugar, boil it all up, and because we don't have a hop bath or whirlpool, we put the hops inside a sieve which has a lid on and lower the hop basket down into the boiling wort. The boiling vessel (copper) is insulated. We run cold water around the insulated jacket and that cools the wort down prior to running it into the fermenting vessel. It is quite a simple process. Again, it's absolutely ideal if you are pushed for space. We brew 5 barrels at a time. Our bitter is at a gravity of 1.045 (I am afraid I haven't done my plato). We put in 230 pounds of malt extract, 20 pounds of demerara sugar and 7 pounds of fuggles hops.

You could say the actual hop basket is not terribly efficient when it comes to keeping the aroma. We don't put in hop pellets. I think some of you know the story about how one day John Young from Young's Brewery sent his quality control manager down. He was sniffing around the pub and so I said, "Look, would you like to come down and see how we are making the beer?" He saw this one leg of a pair of Louise's tights with a pound and a half of hop pellets and he couldn't believe this. I said, "Yeah, sure." So he said, "What do you do the next day?" "Well," I said, "we cut that leg off and put a pound and a half of hop pellets in the other leg." He did actually have the affrontery to ask if they were clean or old tights. That is one of the secrets of how we do actually bury the flavor of our brews! I did all the

brewing myself, and it was quite interesting because one of the classic beers we do, which is now brewing in all the other pubs, is a beer called "Dogbolter." This was a mistake. I was going to brew a beer called "Earth Stopper," with an original gravity of 1.075 and the awful thing is that the telephone went and it was a longer call than I imagined it would be. By the time I got back it had gone past the 1.075 I was going to declare at, and had watered down to about 1.065. I used 1.075 "Earth Stopper" grist but thanks to the telephone we watered down to a mere 1.060 and created "Dogbolter" which we now have worldwide rights on. We have all sorts of hopes and aspirations to brew and market that as a speciality brew. We have a fairly primitive way initially of pumping the wort from the copper after it has been cooled. I used to have a hose pipe running through two clothes pegs, secured together by an elastic band, and again this damn telephone went and while I was gone the vibration of the pump threw the elastic band. In a quarter of an hour I came back and the whole brew had gone down the drain. It is not all plain sailing, and I can tell you more about that later. The problem when we do get disasters is that, not having a lot of back-up supply, we can run out of beer, which is a big problem.

After it has fermented for about 5 days, we then pump through to a cold store where we condition the beer. Really we keep it there between 2 and 5 days. Within 48 hours of racking from the fermenting vessel we will sell it. The longer it hangs around, the more danger we feel there is of infection. Our cellar tanks are great. Courtesy of big breweries, they cost £25 each. If you buy them new they are just over £1,000 each. So we bought about 100 of those and we have a few left, luckily. In fact we sent some over to the chap who has started brewing in his pub in Vancouver. The packaging, I think, cost more than the raw material. It has a front loading mount hole. What we do is run the beer out of the fermenting vessel into the cellar tank and then add the findings. We then give it a 5 second squirt of CO₂ just to make sure the findings are mixed. One of the big problems I have found using these cellar tanks is that with a traditional beer in England the findings are added only just prior to the beer leaving the brewery. As it goes out to the trade the bumpy ride on the wagon shakes up the findings. Of course, with the cellar tank, it completely stops it. We weren't giving the beer the sort of shake that it needed.

We are very lucky being the first in England and particularly in London. We were absolutely inundated with press publicity and lots of free TV. We have a nil advertising budget. We have not spent one penny of that \$4 million turnover on advertising. Everybody seems to support us and come along. We do zany promotions which we work ourselves. I sometimes have to run 5 miles dressed like a goose. I once was very upset because I ran 5 miles dressed as a goose and all around the little kids would say to their mummies, "Look, there is a duck," and I said, "No I am a goose." We even started a thing called the Firkin Club. Now I don't know what you call it when a young lady finds herself pregnant, but we say she is in the club, and we have T-shirts which say, "I'm in the Firkin Club," and they sell like wild.

We had a great start being first. We have now got to work on this promotion thing. We still haven't had an opening party. We just opened the doors on the first day and took in 3½ times what we told the bank manager we would

take, so we were off to a good start. Bass Charrington closed down a pub in Lewisham because the area had problems tradingwise. It was a disco or live entertainment pub that was closed down and left in a shambles. We built our brewery in the Fox and Firkin on the dance floor because the pub was so big that if we didn't put something on the ground floor it would be like walking into an aircraft hangar. Then somebody said, "Gosh, why not have some portholes, so that the brewer can see out, not so that the public can see in." I haven't told you that much about the staff, but we are a fairly young team. I think I am the old man at past 33, but most of the team is sort of late 20s, early 30s except our finance director there. What he is pointing out (in the photograph here), that poor little black thing there is a dead cat which Bass Charrington very kindly left for us when they shut the pub down. That is rather sad, but when you read in journals about how the big brewers are so conscious of hygiene, just remember that slide. The Fox and Firkin brewpub is a bit corny, but it is a lot worse since we spent some money on it. You can see on the far end the portholes. When one is brewing one has to be very careful. The technical brewer never mentioned this, but we are very human brewers, and in the brew house for an 8-hour day it gets pretty hot. You must remember not to stand there picking your nose when you look at your hydrometer. You might have half a dozen people looking at you. We do a full mash in this 20 foot by 20 foot brewery. In fact, we mill our own grist. We take 20 minutes to mash (I think Professor Lewis will be impressed with that). We let it stand for an hour. After 10 minutes of standing, we check our mashtun temperature.

I can tell you a few problems we have had. Being craft brewers rather than technical brewers, I was always told to add in the copper stage a handful of copper findings to help coagulate the protein at the end of the copper bar, and we came up with this expression, an "SBH." Well an SBH is a "standard British handful." One thing that we did here was a brew called "Knee Trembler." The grist for 5 barrels at 1.075 was 330 pounds of pale, 110 pounds of crystal, 7 pounds of black and 11 pounds of hops. Knee Trembler at the time was the strongest draft beer mashed in the country, and someone said after trying it, "My word, if you ever feel the bottom falling out of your life, drink this stuff, and the world will fall out of your bottom." Apart from that, it did cause quite a bit of problem with the police because people actually couldn't quite get to their cars. After it had been on sale a couple of weeks we had to assure the police that we would only sell it in half pints. Of course, everybody started ordering it in half pints.

Let me go through some quick problems that we had. In the first three months, 25 percent of the brews went down the drain. We had the most appalling problems I have ever had in 12 years of brewing. We engaged microbiologists and all sorts of people from research foundations and no one could really solve it. The problem did clear up. It is most extraordinary that we were producing beers that yesterday I was judging in the speciality class. Some of them were much, much nicer. I mean the garlic beer, fennel and honey, and some of these were tremendous. If you tasted some of the beers I was trying to sell to the open-eyed public, you would have been appalled. They tasted like blackberries. They weren't meant to taste like blackberries, and bananas, strawberries and cream. We found our problem to be the fact that our mill was only about 4 feet from our fermenting vessels. If we had a slow fermentation or a bit of dodgy

yeast, it couldn't get off to a good start because of the bacteria in the mill. We produced some pretty foul-tasting beer.

We had awful problems because we don't have a well and we had to plug into the tap water. One day I was filling up the hop liquor bath prior to brewing the next day and there is a roadworks down the road. When they fixed the water main they thought it would be a good idea to flush down the work they had done with chlorine. It was just at that moment that I was filling up my hot liquor bath. This other thing we learned is that in a confined space the brewer in there now has two pairs of Wellington's for fermenting and cleaning down and wandering around. The other thing we had was appalling stuck fermentations. I was taking special notes when we heard about dextrans because we have a well-modified malt and we were producing far too many dextrans. We like to mash at about 148°F, and after this had gone on for about 6 weeks, I just could not understand it, nor could all those well-qualified scientists. We worked out then that the thermometer we had put in the original equipment was reading 8 degrees too low. so the wort was too hot.

The Frog Firkin was born about 8 or 9 months after the Fox and Firkin. The building was originally condemned because of wet rot. All the joists had to be renewed on about two floors. Good old Allied Breweries gave it up and we bought it. That is very important because one can't get these brewing licenses easily, so if you are a desperate man like I am, you take hold of the most appalling properties just to get that pub license. This was our third brewpub; we had taken one from Truman-Grand Metropolitan, we had taken one off Bass Charrington and now we had taken one off Allied. People were beginning to close ranks. If we rang up a big brewer and asked to use their yeast, they said, "No, every pint that you little brewers produce is one less that we are going to produce." We asked to join the Brewers' Society and that is quite an employer's cartel in that they said, "No, you are too small." We asked, "How can we get big if we don't have your support?" Anyway they wouldn't allow us, any of us new brewers to join on the grounds of us being too small, so we formed our own association called the Small Independent Brewers' Association. It is interesting because only last March we opened our fifth brewery, and because I am so fit I don't have this minimum academic requirement of basic qualification in arithmetic and I am not allowed to join any of the established brewing guilds or associations, which is a bit silly. Anyway, while they are sorting out their academic requirements, I think I'll just go and open a few more breweries. Big breweries want their cake and eat it too, so they sold their pub, the Double Diamond Pub. If we sell their lager they'll give us some money, so we raised about another £15,000 off them.

We have now learned from our experience with the Goose in Firkin and the Fox in Firkin that pub breweries usually have to fit into pretty small rooms, a pretty spartan drinker's environment. The environment makes drinkers feel at home. It is interesting because big brewers have now started copying us. Whitbread and Allied are now brewing in their own pubs. They have got their little brewery which is great, but then they go put it into a sort of cocktail bar environment. They put all their machines and thick carpets and things, and the person who wants to go out and drink strong beer probably doesn't feel comfort in an environment like that.

At the Frog and Firkin we use Munton and Fison crushed grain because the brew house is so small. We haven't got room for the mill and auger. We line up the three sacks of malt and regulate the flow of the grain into the mashtun a very scientific process called, "how big a hole you make in the sack of malt with this knife." One day we used a sack that already was open and a bloody great rat jumped out into the mashtun. The brewer came running up saying, "What should I do, what should I do?" "Fish the bloody thing out," I said. I'm pleased to say that in maybe three years of mashing on a small scale we've only had one stuck mash and it was for exactly the same reason Professor Lewis said. We were drawing it off too fast from the bottom and we weren't running enough sparge liquor on top. If you remember when Prince Charles married Lady Diana last year we produced a special brew for that occasion called, "Prince of Ales." I wanted to call it "Diana-mite" and have in brackets, "Or might not." I absolutely endorse Professor Lewis' comments about hydrometers, we only use ours at the end. We feel temperature, timing and cleanliness are the three most important things.

We've ended up getting involved with a firm of stainless steel fabricators. They had a lot of people approaching them to make brewing equipment and we had a lot of people asking us to teach them how to brew. So we formed a company called "Brew-well." It is half Bruce and half Welsh. We designed a manufacturing plant and train brewers on our existing equipment.

Our resident scientist is Stephanie Harvey. She actually helped me sort out my problems at the Fox and Firkin and is a proper microbiologist. She was a research chemist at the Brewing Research Foundation in the U.K. and the assistant curator at the National Yeast Culture Center, so I sort of got away from my amateur craft approach to brewing. But now we've got these five breweries producing anything up to 6 thousand barrels of beer a year. Obviously we've got to have very stringent quality control. There's no point in me trying to learn it. I'm far too stupid, so the best thing is have a highpowered lady like Stephanie.

With pub brewing you don't have this massive and ever-increasing distribution, transportation and warehousing cost. Our beers aren't cheaper than the national brands but they are stronger, so the saving we make on excise and on transport, we can pass on. We're now spending between 15 and 20 thousand pounds a month on beer duty so its really quite high. On a pint of Earth Stopper selling for about a pound the duty alone is sixty-five pence. So it is quite considerable. It has an advantage on one's cash flow, in that one reckons to brew and sell within about 10 days. We don't pay the excise duty until the 25th of the following month. So we've got the customer's money sitting in the bank before we have to pay off those big excise taxes to the government.

I'll outline the cost of the small brewing. We end up with a much higher labor cost because we've got to pay a guy 5 or 6 thousand pounds a year to brew 20 or so barrels when the same guy could be brewing two hundred or five hundred barrels. We also have problems getting reasonably small deliveries -- one or two tons of malt at a time and one or two hop pockets (250-500 pounds). Raw material costs are generally quite high but here are a few costs for you. Our average duty, taking the range of gravities

brewed in a month, works out about £51 per barrel (that's 36 imperial gallons). Materials work out at £13, the wages at £7, what I call heat, light, and power at about £2 and depreciation at about £2 a barrel. That works out to about £75. (Now that's for mashing but at the Goose and Firkin unfortunately, the disadvantages of malt extract is that it costs about 4 or 5 pounds a barrel more than mashing your own.)

The most recent addition to our brewery-pub concept has been the Fleece and Firkin down in Bristol, which is our first move out of London. It might be our last as well. I don't enjoy steaming up and down motorways. We were asked to go down to take over a Georgian warehouse dating right back to the early 19th century. It adjoins two Courage pubs. We'd the complete audacity to go along and say, "Do you mind if we have a new license? 'Cause we want to do a brewery-pub." And they all said, "What's a brewery-pub?" So we had to explain to everybody in Bristol what a brewery-pub was and get coachloads of people up to London to show them what we've done. We ended up getting probably the first new license to retail beer in Bristol in this century. We paid several thousand pounds in legal fees. We were going to create a precedent and we had all big brewers after us. We had a survey done which showed that 100 percent of the national brewers and their licensees objected to our license application, 76 percent of the population of Bristol and the west country wanted it. I hope when you are over in England, you will try and contact us through the American Homebrewers Association and come and see one of the pubs.