

Green Communities: Episode 3 - Worsall village hall - GSHP and solar panels

Leah - Hello, my name is Leah Furniss, and I'm part of the Community Support team at Community First Yorkshire. For those of you who manage Community Buildings and Village Halls, it is becoming increasingly important to think about how you heat and light your halls and how to do this in as environmentally friendly way as possible. We are increasingly receiving more and more queries from halls about how they can do this. So this morning, I'm joined by Debbie, a committee member with responsibilities for facilities of a village hall in the Hambleton district. She's going to share with us what they have done. Morning, Debbie.

Debbie - Good morning.

Leah - Thank you ever so much for joining us. Could you tell us about the changes you've made to how you heat and light your hall?

Debbie - Yes, certainly. And I think I'll give you a bit of history, actually. Way back in 2009, we decided we needed to buy a new village hall simply because the insurance company wouldn't insure our old wooden building through the winter. So we had to close it through the winter, although we could use it in the summer. But then we took the decision to actually try and raise some funds through various methods, lottery being the biggest one, to do a new building. It was at this point when we were at the design stage that various organisations, came to us and spoke to us about renewable energy heating, and ground source heating is actually the one that we went with.

So that was a decision that was made in conjunction with building a new hall. Unfortunately, I think I've said already, we don't have any before and afters in terms of what it looked like as the buildings are completely different.

The old one was an old and wooden building, as you can imagine, not used, not hot, that sort of thing. And this is a brand spanking new brick built purpose built, it's quite big. It's got fully automated ground source heating.

Leah - Lovely. Just for curiosity, the old building, what kind of heating did you have in that?

Debbie - I seem to remember it was electric storage heaters. There was no question about it being oil based. I'm fairly sure it was electric storage heaters.

Leah - Thanks. That's just interesting for the comparison. So just to pick up. Obviously, I was going to ask you how long the process took of installing them. But with it being a new build, it was obviously quite a long process. Where there any issues, particularly with installing that element of it the ground source heat part of it?

Debbie - No, it seemed fine and we were very lucky in as much as the land that the village Hall was built on was bequeathed to the village by a local farmer way back in the day, I think, probably in the 1940s or 1950s. I'm not quite sure how long ago.

So we had that patch of land and very luckily, the son of that farmer still has fields either side of the hall. So we were able to sink our boreholes and I'm fairly sure they're on his land, because we haven't got much of a space at the back of the hall and in the carpark. So I'm fairly sure they're in his fields, and so we've got two boreholes, which seemed to be the method that they wanted us to go with.

But do remember, that when we started this process it was probably 15 years ago; trying to get lottery funding and any other kind of funding, as you know, is not an easy process. It's very time consuming. I imagine that the whole issue about ground source immutable heating will have moved on with the technology.

Leah - Yes, I know - I'm sure the technology certainly has moved on, although I'm not an expert myself. It's a step too far for me!

When you were saying that people had approached you, around considering renewable technologies. Did you ever consider anything else? Was it quite obvious for you with your circumstances that it was ground source that you were going to go for? Because we have heard from people that I think are put off by the expense of it? So it'd just be interesting to hear why it was that one that you went for, or if there were even any others under consideration?

Debbie - I don't think air source was really on the scene at the time to be honest, but I can't remember, it's 10 years ago. I can't remember if there's any other and particularly renewable energy. We did look at LPG and a tanker, but that just wasn't feasible. Of course, solar wasn't really at the forefront either by that point. So as far as I can recall, ground source was really the only green one. There was two options to that. There was either the filament that they laid out like a blanket almost, or the boreholes, so we did have two options. And the boreholes were less intrusive, to be perfectly honest.

Just going through it now I think they may well be more expensive. But we did manage to attract quite a bit funding.

Leah - Okay, so that was the other thing I was going to pick up. I know it was a little while ago and obviously funding criteria change and funders change. But a lot of the big ones do actually stay the same. So you mentioned the lottery. Was there anybody else that you remember? Are there any other activities or things you did to get your funding?

Debbie - Yeah, loads and we got a lot of matched funding, which was very popular at the time. And as far as my memory takes me, I think we got match funding for this, it was either from, well, we got one lot of money from BIFFA, which I think they're still on the go, not sure.

And the other one was, I think, the carbon renewable organisation or something like that, something to do with carbon, which I don't think is still around. But we certainly managed to get funding from them. It didn't, as far as I recall, it didn't cover the whole cost, but it covered a huge amount. But yes, you're absolutely right, in terms of thinking of a borehole, it's not a cheap option, necessarily. But you've got to weigh it up against all the other criteria.

Leah - So yeah, that was going to be my next question actually, what have been the benefits for the hall? I know, it's hard with it not being a change to an existing building to directly compare energy bills and things, but do you think that you have definitely seen anything over time? Because it's been quite a long period of time you've had it now, you should have really hopefully seen some benefits?

Debbie - Yeah, we have - but there are there are downsides to it, which we'll come to but yes, it provides an ambient temperature, which you can set.

So yeah, an ambient temperature, which is fine and that's right throughout the hall. All rooms have got the pipework underneath. The main hall is actually a badminton court, so that's how big it is. With a very, very high ceiling, and then we have a smaller hall. We have a kitchen and a bar area as well, all of that is heated oh and the lobby, and the toilets. So it's quite an extensive system.

As far as benefits are concerned, we managed to; well not we - the chair is a local farmer and he's very good at negotiating deals as they are and he managed to negotiate a pretty good deal for us in terms of what our energy costs are. On top of the fact that we get it to through the ground source heating. So yeah, I would say the benefits are pretty, pretty good. But as you said, it's very difficult to do a comparison, very difficult. But I could get you some costs, if you would like me to?

Leah - Oh, yeah, that might that might be helpful, actually, certainly at the next meeting, people may pick this up and ask you some questions about it.

If anyone's listening, and they are thinking about how they could fund this project, there is support available through Community First Yorkshire with identify funding for projects.

We have recently also put together a fact sheet which does pull together including details of some green organisations that keep lists of what sorts of funding is available and other funding information can be considered as well. So do have a look on our website, if you want a little bit more information on that.

You did briefly mention there that there are also some small issues with it. And are you okay to go into little bit more detail on those?

Debbie - Yeah, absolutely. I mean, the biggest one for us is that it's fantastic for providing an ambient temperature, however, it's very unresponsive. So if you're going from say, having a yoga class to having a badminton class, let's for argument's sake say the yoga people are on the floor, obviously, but you need to be a bit warmer down there. But not to be as warm for the badminton do. We found this is an ongoing problem that because it is such a big system, it is very unresponsive in terms of accuracy.

In terms of ambient heat it's fantastic, it keeps it perfectly, you know, I think it's 20 or 19 degrees. Wherever it's at, it keeps it at that and it's fine. It works very well.

So we've actually had to install electric heaters on the wall to give a boost. We've got some convector heaters on the wall, which are on timers, so they're not left on all the time.

But yeah, we had to do that because we did find that some of our customer's just felt it wasn't warm enough. That is an issue. Yeah, that would be really good for wholesalers that are in this to know.

Leah - I do also know from chatting to you that have solar panels as well on your hall. How are you finding those?

Debbie - Good and they were installed a lot later. They were only installed in the last probably four or five years. I don't actually know why we took so long to do it because we have a fantastically huge south facing roof. But anyway, we decided to do it. So we've got the maximum number on there. 16 I think we've got a good feed in tariff, obviously. I personally have got solar panels on my roof that I've had since 2012, my feed in tariff is 42 pence per unit, which is extremely good. I think we only get something like nine or 12 pence or something for the hall. So it's not fantastic but they are paid for you know, the money, they generate, we sell all the power to the grid. So yeah, it doesn't actually provide anything directly. We don't heat anything with it, because we've got the ground source heating, so it was just a case of generating power to sell back to the grid.

Leah - Oh, so that's interesting that it was about generating income for you. And how did you fund the solar panels? Can you remember?

Debbie - Yeah, we actually had some money in the bank and we're actually quite a commercial venue. We do a lot of weddings. We do probably about 12-14 weddings a year and we've got quite a lot of hiring's, which we charge at a reasonable'ish rate. So we do have quite a good income, and so we do have quite a bit of money in the bank. - Sorry. We did have

Leah - and did obviously do quite a few things.

Debbie - Yes.

Leah - You're going to be going on with wedding requests going forward, probably!
So obviously, you've got the ground source, you've got the solar panels. Are there any other future plans that you're considering? Anything that's sort of in the pipeline? Anything on your wish list?

Debbie - Yeah, actually, we have just replaced the double glazed windows as well. And we have absolutely enormous floor to ceiling windows in the main hall, absolutely huge they are, and because the halls south facing the sun damage to the slats on the boarding, what do you call it panel boarding that's on the wall, can't remember what we call it now! Became really quite damaged by the sun. So we've actually just taken because we were closed, we took the decision to spend the money and we've actually just replaced all the double glazing with really good quality new glazing with the plastic upvc, previously, there were wood, so we've done upvc. And we've actually put new PVC, cladding is the word I was looking for, on the building as well. Hopefully that will mean that it stays less maintenance, you know, less repairs, etc. So we've done that.

Actually, we've also installed and I'm not sure about this yet, because it hasn't been actually used yet is some air conditioning units, which can actually be used as heating as well if we need to. So we have two huge units on the ceiling almost in the main hall, and we've got two units outside and they're expensive to run, I have to say.

And because at the end of the hall, we have doors that open out onto a patio area. And we now have somebody who's bought the church at the end of that, and it's a house now, it didn't used to be, and we've also got some residents over the road. Anytime we open the doors, which clearly when you've got a wedding of 150 people in there, or a party or whatever, they tend to spill out onto that patio. They're

not supposed to because it's not licenced but they do. And one of the reasons they do is because again, the ambient temperature is so unresponsive, you can't switch it down. So if you've got 150 people in there, then obviously that's a lot of body heat, and then they're dancing, etc., then the doors opened. So we decided in terms of being kind to our neighbours that we would put in this air conditioning system. So I say it's not actually been used yet. But yeah, that's another thing that we've done. I think that's probably about it in terms of heating and lighting.

And we do have what's the word? Environmentally friendly, I think it's the word lighting. And again, we're talking 11 years ago Leah. So things will have moved on dramatically in terms of that, but we've done what we could at the time, whether we'll be required to upgrade it at any point remains to be seen really.

Leah - So again, I think that's really interesting for halls. When considering this to get a realistic picture and it does demonstrate if you're hiring out your venue and have big events like that it does demonstrate some of the challenges.

So I suppose my last question really is if anybody was considering either the ground source heat pump or solar panels, is there any sort of top tips for them? Anything you'd recommend that they thought about particularly carefully before going ahead with it?

Debbie - I think, yeah, definitely have a good look at the costs and funding that's available, and whatever is available out there. But I do think that the ambient temperature issue is one that you need to think about. And certainly, if people wanted to come and have a look at the hall, that's fine by me, I can take people on a tour around it, but I do think that's one of the things that we would reconsider. And yeah, it hasn't caused massive issues, it hasn't. But it is definitely something to think about - but then again when we went to Kirkby? We went to a hall for one of your meetings?

Leah - could it be Kirkby Fleetham?

Debbie - Yeah, that's the one. Now they've got a really responsive heating system they can do on the phones. But I don't actually know how it's run. I don't know whether it's an oil based heating system, or not I don't know. But that would be ideal if we could do something remotely. But we can't. Again, that could just be down to age.

Leah - That's been really interesting Debbie, thank you ever so much for chatting to me today.

If you are a hall and you need any further information on issues relating to energy, or any aspect of hall management, please do visit our website, www.communityfirstyorkshire.org.uk where you'll find lots of further information.

Thank you very much Debbie.

Debbie – You're welcome. Thank you.

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