

Read 'awl' about it

The Lockdown Newsletter from the Cannock Chase Shed

ISSUE No. 13



This week...

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- Fantastic Plastic
- How to recycle HDPE at home
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SHED NEWS

- The Committee held a trial social meeting in Hednesford Park last week. We sat in a circle, two metres apart, some brought chairs, flasks etc. It was very successful, the sun shone, conversation flowed easily despite the social distancing, and it was good to catch up, and a chance to discuss people's current projects.
- Lynn Evans (from The Friends of Hednesford Park) dropped by for a chat about a possible upcoming project...

BREAKING NEWS

The Cannock Chase Museum Website now says that they will be reopening next Thursday (August 27th). We don't know yet what this means for us... watch this space.

An article

(just give me the bare bones and I'll do the rest).

A picture

A question

A letter

Your item could be here...

Something Else...?

An anecdote

Items For Sale, Free or Wanted.

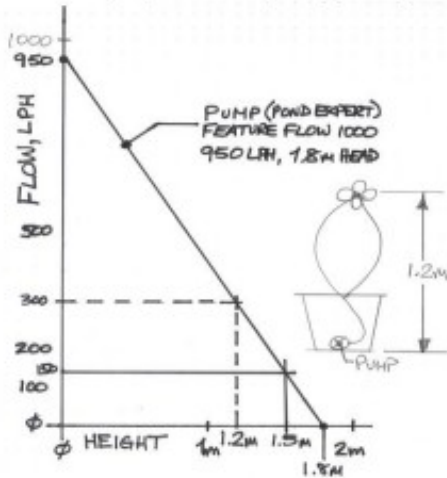
A request for help/advice

If you have an idea for anything I could include in the next newsletter, please get in touch, (My contact details are on the first page). Thanks,

Anne.

Episode 3 – The Heath & Robinson Water Feature. The Pump.

H & R decided to look into ratings of pumps, as the flow rate of a test pump was far lower than expected given the specification on the pump. Clearly the flow and head figures of the test pump cannot be obtained at the same time was the conclusion. By holding the pipe at the rated head level, there was pretty well zero flow, and when the pipe was at pump level, there appeared to be maximum flow. They decided to plot the two

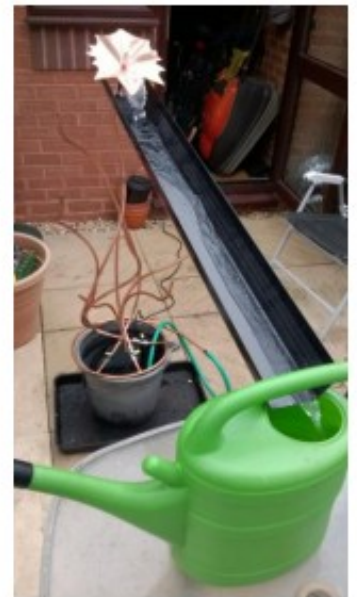


specification points on some graph paper for a range of pumps from PondExpert. So the FeatureFlow 1000 was plotted, allegedly giving 950LPH max (Litres Per Hour) at zero head, and zero LPH flow at 1.8m head max. The result was the straight line shown. They then drew on the 1.2m leaf height they were using to give the resulting flow, which came to around 300 LPH (the dotted line). It looked like a suitable pump, as they needed around 180LPH from the first flow test.

However their dreams were shattered after buying the pump and a second water flow test shown, once again into the watering can. The model 1000 gave 150LPH at 1.2m high, a lot less than the graph's 300 LPH. A bit of head scratching took place at this point as they couldn't understand why the

dotted line at 1.2m gave a much higher flow rate than they were getting in the test. It turns out to be quite complex. With some research, it seems you have to allow for friction in the complete length of piping, and the horizontal pipework "lift" too, as well as the obvious vertical lift. Both those extra items result in additional "head" needed on the pump. So the upshot of all three losses was tabled as below:

TUBE LOSSES	LENGTH	MULTIPLIER FACTOR	PUMP HEAD HEIGHT NEEDED
Vertical Lift	1.2m	1 x height	= 1.2m
Horizontal "Lift"	1.5m	0.1 x length	= 0.15m
Friction Loss "Lift"	2.7m	0.07 x length	= 0.19m
		TOTAL HEAD NEEDED	= 1.54m



So for a 10mm pipe the total "head" needed was nearer 1.5m, not the measured 1.2m, which would explain the discrepancy they had. This 1.5m line was plotted in addition on the graph above (the solid line) and gave nearer 150LPH, which is exactly what the flow test provided.

The test results were now understood, and they realised they should really have bought the next larger pump to overcome the friction as well as the vertical height. Once again, hindsight is a wonderful thing. If only the pump suppliers would tell you about these things, but they don't. They just give the headline maximum figures of 1.8m and 950 LPH.

Although that was bit of bad news, they decided to install the feature in the garden anyway, using a pond liner underneath to act as a water reservoir, and mount the feature on a square concrete slab.

After all the excitement, with the test rig, calculations and graph plotting, digging a hole and installing the feature in the garden, H & R thought they deserved a well-earned rest to admire their handiwork, even though the flow rate was less than they had hoped for, it still looked okay.

H & R

Fantastic Plastic

by Anne

I always have a hard time putting things in the bin if I think they could be useful. Plastic causes me particular problems. Plastic is an incredibly useful and versatile material, and we throw away tons of it every day. It causes problems for the environment, and although some of it can be recycled, this isn't without cost, and I suspect that large quantities of it still end up in landfill.



We're told to REDUCE, REUSE, RECYCLE. It's not that easy to reduce the amount of plastic that we use. I do collect all manner of yoghurt pots, containers and meat trays to reuse, but I've been wanting for some time now to have a go at DIY recycling.

Plastics come in many different types, some of which give off noxious fumes when heated, but my internet searching has come up with a number of people who are recycling HDPE, (High Density Polyethylene). This plastic can be melted without any dangerous fumes, and when compressed into a solid block it can be cut and shaped in the same way as wood.



The big difference between working with HDPE and wood, is that all the waste can be collected and reused. Imagine for example using a lathe, it creates a huge amount of waste material, which can't really be used for anything. Turning plastic on the lathe creates long strings of waste, which are easy to collect and reuse

Recyclable plastics have a logo stamped on them to identify the type of plastic – HDPE has the number 2 inside the triangle. (With or without the letters HDPE). The most common items made from HDPE are bottle caps, milk bottles and plastic bottles used for detergent and similar liquids.



By Anne

Recycling HDPE at home



Cut it up or shred it, using scissors, secateurs, paper shredder or blender.

Heat it to around 180° C (some tutorials say 200° C), either in a regular oven, mini oven or a panini press. The panini press method is quicker, because it heats top and bottom simultaneously, and pressure can be applied to flatten the plastic while it's being heated.



Compress the melted plastic in some sort of mould to create a workable block. The plastic doesn't stick to wood or metal, so these are both suitable for use as moulds.

It's important to avoid air bubbles, especially if making blanks for turning on the lathe. (Although if a piece breaks off, it's pretty easy to melt it a bit and stick it back on). In the same way, a larger block can be made by cutting the plastic, melting the two faces, and sticking one block on top of the other.

Once you have a block of plastic, the possibilities are endless...



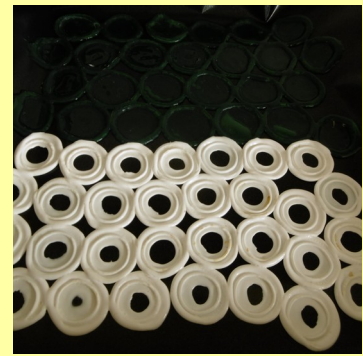
Experiment 1. Bottle Caps



Wash and dry the caps.



Lay out on a baking tray covered with non stick sheet.



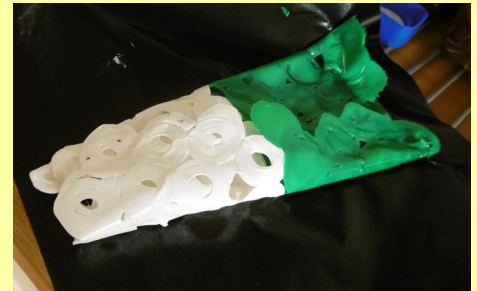
Melt in the oven. (I don't own a panini press).



Add another layer.



Melt again.



Use the non stick sheet to roll the plastic, wearing heat proof gloves – it's hot and very sticky.



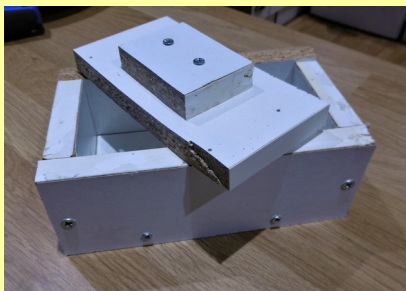
Squeeze it together a bit till it forms a lump and then reheat.



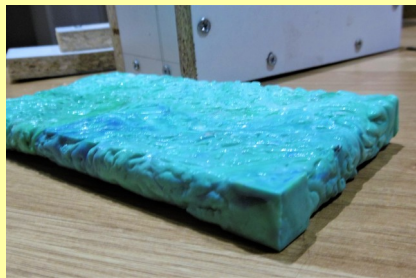
Flattened with the aid of a rolling pin – not very impressive.



My attempt to melt it into a wooden mould was an epic failure, apparently it does stick to wood...



Enter a hastily constructed mould...



I put the mould in the vise, left it till it was cool, and finally I have something resembling a block.



The pattern imprinted in the plastic is from the wavy lines on the silicone oven gloves I was wearing when moulding it. I actually rather like it.

Experiment 2: Milk bottles



My first attempt was a failure. I put small pieces of the plastic into a silicone mould, hoping they would melt and pool in the bottom of the mould. I decided to abort when I noticed the mould starting to bubble and melt.

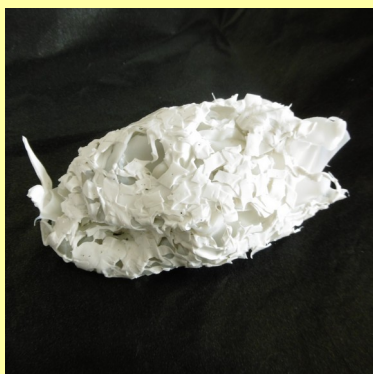
After a quick search, I unearthed an old silicone baking tin that I knew would withstand high temperatures. (I didn't mind sacrificing it, as it was pretty useless as a cake tin. The silicone had too much give, so when cooked, the cake was larger than the metal edge of the mould, and wouldn't come out).



For the first mould I had cut the plastic very small, but decided that I could now use much bigger pieces.

I lined the base of the mould with plastic, and as it melted I added more...

...and more.



Three milk bottles gave me a good handful of molten plastic...



...which I clamped between two pieces of wood (the wood was painted – the hot plastic made an impression in the paint, but didn't stick).



I wasn't particularly satisfied with this, the mixture of white and opaque bottles gave it a patchy appearance.

More twisting and stretching would have given a more marbled effect. I heated this to 160° C, which wasn't really hot enough, so I may have another try with this piece.

TRIVIA QUIZ

1. In which city was Boris Johnson born?
2. Which member of the Beatles was walking barefoot over the zebra crossing on The Beatles' Abbey Road album cover?
3. How many members were in the Monty Python team?
4. Which famous ship was named after the nickname of the witch Nannie Dee in the Robert Burns's 1791 poem Tam o' Shanter?
5. Henry VIII had two of his wives executed, Anne Boleyn was one, can you name the other?
6. Which animal can deliver a kick capable of killing a lion and also attacked singer Johnny Cash leaving him addicted to painkillers?
7. According to the Queen of Hearts in Alice in Wonderland, what kind of food is eaten tomorrow, yesterday, but never today?
8. Which 2004 American drama film starring Sandra Bullock and Matt Dillon shares its name with the collective noun for a group of rhinos?
9. Four of the five Olympic rings are green, blue, red and yellow, which colour is the fifth ring?
10. What name is given to a cage or box filled with rocks, concrete, or sometimes sand and soil for use in civil engineering?
11. Which actress sang the song "Team Work" with Bing Crosby and Bob Hope in the 1962 film The Road to Hong Kong?
12. What do galena and a Cluedo murder weapon have in common?
13. What is the Swahili word for 'journey'?
14. True or False. The catchphrase "Beam me up, Scotty" has never been said in any Star Trek TV series or film?
15. What is the stage name of singer Stefani Joanne Angelina Germanotta?
16. Which continent has the largest Catholic population?
17. The M90 motorway is the most northerly motorway in the United Kingdom; which city is at its northern end?
18. What does the word 'pont' mean in both French and Welsh?
19. Name the world's fourth most populated country?
20. Which American crime drama starring Alice Braga as Teresa Mendoza shares its name with the nickname of a Scottish market town?
21. What is the literal meaning of the word 'Islam'?
22. Which hospital is the the oldest in Britain? Above its entrance is the only public statue of King Henry VIII in London.
23. Which American university awards the Pulitzer prize?
24. Which country do swallows migrate to when they leave Britain for the winter?
25. Which slogan, used during the late 1960s and early 1970s as a symbol of a non-violence ideology, was coined by the American beat poet Allen Ginsberg? (Hint: It's a two word slogan)
26. Which animal is the symbol of the American Republican Party?
27. "When You Wish Upon a Star" is a song written for which 1940 film?
28. Including its claws, how many legs does a crab have?
29. 16th-century pirate Francis Le Clerc, nicknamed "Pata de Palo" by the Spanish, was the first modern era pirate to have what?
30. At the 2017 Oscars, which actress incorrectly announced La La Land as Best Picture instead of the actual winner, Moonlight?
31. Which city's cathedral is the largest cathedral and religious building in Britain?

answers on last page

HUMOUR

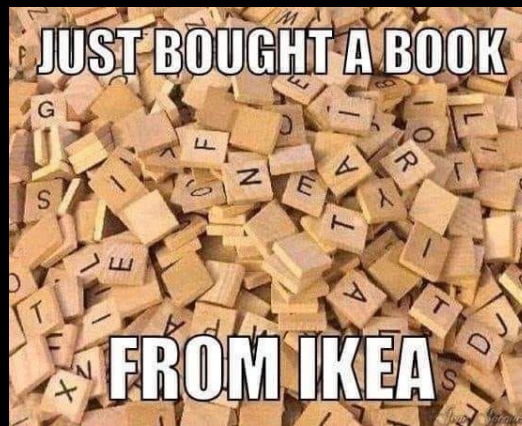


To err is human, To blame it on Someone else shows management potential.

Autocorrect has become my worst enema.

Wife sitting beside husband
"I LOVE YOU," Says she.
"Is that you or the wine talking?" asks he.
"It's me talking to the wine." replies she.

TIME FLIES LIKE AN ARROW,
FRUIT FLIES LIKE A BANANA.



IRONY,
THE OPPOSITE OF WRINKLY.

When I get a headache,
I take two aspirin and keep away from children,
just like the bottle says.

A SLICE OF APPLE PIE IN JAMAICA IS \$2.
IT IS \$2.50 IN THE BAHAMAS.
THESE ARE THE PIE RATES OF THE CARIBBEAN.



The police officer said "You're staggering." I said "You're not bad looking yourself." We laughed and laughed... I need bail money.



James Bond Quiz

ANSWERS

1. The villain in The World is not Enough is played by Robert Carlisle and is called Renard. Renard is the French for which animal? **The Fox**
2. The film Never Say never Again in which Sean Connery returned to the role of James Bond was a remake of which earlier film? **Thunderball**
3. In the same film, which British comedian played the role of a bumbling British spy? **Rowan Atkinson**
4. What make of watch does James Bond wear in the film Quantum of solace? **Omega**
5. Who currently plays M? **Ralph Fiennes**
6. Which Bond film was set predominantly in India? **Octopussy**
7. What is the name of the character who regularly appears in James Bond films as Bond's friend in the CIA, almost invariably played by different actors? **Felix Leiter**
8. Which of these has not been a bond girl - Pussy Galore, Holly Goodhead, Plenty O'Toole, Mimi Lay, Mary Goodnight, Molly Warmflash **Mimi Lay**
9. How many English born actors have played James Bond in authorised films?
2, Roger Moore and Daniel Craig. (Connery - Scottish, Dalton-Welsh, Lazenby - Australian, Brosnan- Irish)
10. What is the motto of the Bond family as found on their coat of arms?
The World is not enough

Answers to trivia quiz:

- 1) New York City
- 2) Paul McCartney
- 3) Six (Graham Chapman, John Cleese, Terry Gilliam, Eric Idle, Terry Jones, and Michael Palin)
- 4) Cutty-sark
- 5) Catherine Howard
- 6) An ostrich (Cash was kicked and wounded by an ostrich he kept on his farm)
- 7) Jam
- 8) Crash
- 9) Black
- 10) Gabion
- 11) Joan Collins
- 12) Lead (the mineral galena is a lead ore, and the weapon is lead piping)
- 13) Safari
- 14) True, it has never been said. (The closest Kirk ever came to saying that phrase was in Star Trek IV: The Journey Home, in which he says, "Scotty, beam me up".)
- 15) Lady Gaga
- 16) South America
- 17) Perth
- 18) Bridge
- 19) Indonesia
- 20) Queen of the South
- 21) Submission
- 22) St Bartholomew's Hospital, commonly known as Barts.
- 23) Columbia
- 24) South Africa (and Namibia)
- 25) Flower Power
- 26) Elephant
- 27) Pinocchio
- 28) 10
- 29) A peg leg ('pata de palo' is stick leg in English)
- 30) Faye Dunaway (she was given the incorrect envelope)
- 31) Liverpool's (largest cathedrals in order: Liverpool, St Paul's, York Minster and Lincoln)

We don't stop playing
because we grow old...
we grow old because we
stop playing.