

Ecobricks

Well, recent news means we may all have a lot of time on our hands, for longer than we were expecting and I have a project that you might want to have a go at to use that time.

There is an organisation called the Global Ecobricks Alliance, website <https://www.ecobricks.org>, if you can have a look at it. There is a considerable amount of information on it, some of which I didn't read, but a lot of it I am including here, either as a direct copy, or edited as there is so much!

The aim is to deal with plastic waste using a different approach. At the moment we recycle or send it to landfill, or worse allow it to get into the environment where we don't want it to be (just look at the litter on the roads locally, and the huge platforms of plastic in oceans and on beaches).

So this is your chance to make an ecobrick (or several ecobricks if necessary).

Why Ecobrick?

Ecobricks keep plastic & CO₂ out of the biosphere.

Ecobricks raise ecological consciousness.

1. Save, Segregate, Clean & Dry Plastics

Ecobricks are made with clean and dry plastic. Start by segregating your



plastic from all other materials. If there is any food, oil or dirt on your plastic, be sure to wash it off. Dirty plastic inside an ecobrick will lead to microbiological growth and methane forming inside your ecobrick. You want to avoid unsightly ecobricks, bloated bottles and in rare cases, caps popping off. It's also important that the plastic is dry! Wet and moist plastic will also encourage microbial growth.

2. Choose your bottle

Before you start ecobricking, ideally choose one specific bottle and stick with it. When it comes time to building, having perfectly identical ecobrick sizes is important for making solid and steady modules. It also helps having at least the same general size of bottle when it comes to building with earth and ecobricks.

- **Availability**

The last thing you want to have to do is buy drinks to have a bottle so go with what you have. Projects can be found for whatever size ecobricks are available.

- **Volume**

Large 1500ml bottles will take a lot of plastic, but also take a long time to make! Small volume bottles allow first-time ecobrickers to finish their first ecobrick and quickly learn from their mistakes. Large bottles are better for advanced ecobrickers.

3. Your Project

For outdoor building projects, exact sameness is not so important, so long as the volume is consistent (i.e. all 600ml bottles). Depending on the size of construction, you will need different size bottles. For example, small bottles make good walls, and large bottles make good benches. If we get enough we could have a Halewood project!

4. Get your stick ready

Bamboo and wood make the best sticks. The size of the stick depends on the type of bottle you go with. You want a stick with a diameter roughly one third the width of a standard bottle opening— so about 6mm. You want your stick to be about twice the height of your bottle, with a slightly rounded tip.

Avoid sharp cornered sticks as they can rupture your bottle– and yes, this means you have to start your ecobrick all over again!

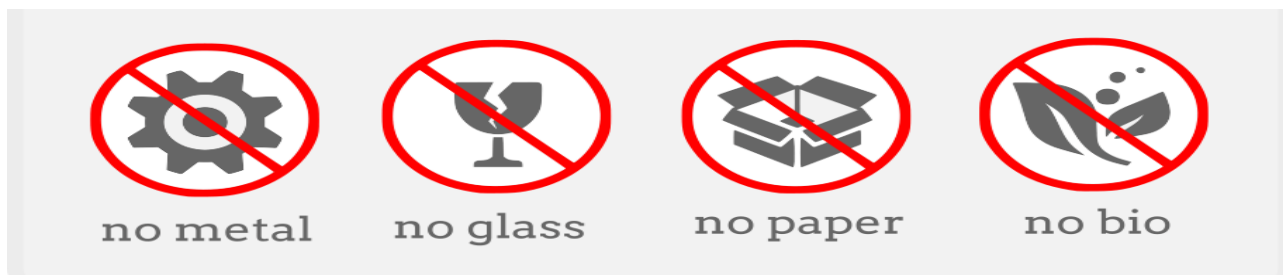
5. No glass, metal or biodegradables

What you **don't** put in your ecobrick is just as important as what you do! The reason we are putting plastic inside a bottle is to secure it– otherwise it would get loose into the environment and degrade into microplastics and toxins. Stuff like cotton cloth, metal, paper, cardboard, glass and organic material will not degrade into toxins so there is no need to secure them. Be especially careful **not** to pack sharp metal or glass into an ecobrick– they can rupture the sides and pose a danger for handling. There are other solutions for these materials:

Paper and cardboard can be safely industrially recycled, composted or burnt.

Biodegradables can be composted or left to biodegrade.

Metals and glass can be industrially recycled.



6. Start by adding a bottom colour

To create your ecobrick's bottom colour, choose a soft plastic with a solid colour, then push it down to the bottom of your ecobrick. You'll want to fill the bottle loosely about half way with soft plastic of your chosen colour. Then, pack it in with your stick. If your bottle has "legs" or dimples at the bottom be sure to pack these solid and full. Once all your soft plastic is compressed you want it to fill the first 1-2cms of the bottle.

By giving your ecobrick bottom a colour, you open up colourful design possibilities for making modules or earth and ecobrick walls

7. Pack the bottle tight, mixing plastics as you go

Now it's time to pack away! Cut or rip up large plastics into smaller pieces. The smaller the pieces, the denser you'll get! Fill the bottle up half way with loose plastic, then use your stick to push down around the sides of the bottle. Keep pushing down as you move around the circumference of the bottle. Once compressed, add more loose plastics. To maximize the density, it's good to mix soft, then hard plastic. If it's your first ecobrick, weigh occasionally to make sure you are on track for your target minimum weight.

Did you push too hard? In rare cases, when using a sharp stick, a thin bottle or too much lateral force, an ecobrick will rupture. If so, start again. Ruptured bottles will not last and can leak plastics. Cut the bottle open, remove the plastic and start again. Cut or damaged PET plastic is readily recycled.

8. Weigh your Ecobrick to ensure quality

Ecobricks that are solid and strong are densely packed. The full volume is used for plastics and there is no air or spaces inside. The GEA has determined that a density of **0.33 g/ml** is the minimum for a passable ecobrick. This means that a 600ml bottle will have a minimum weight of 200 g and a 1500ml bottle will have a minimum weight of 500g. Experienced ecobrickers tend to regard 0.37g/ml and above as the range of a good ecobricks.

Ecobricks that are below 0.33 g/ml are too squishy to be used for modules and are not ideal for earth building. Soft ecobricks can compromise structural constructions and will dent easily, which reduces their lifespan. Low density ecobricks are also fire hazards because of the air pockets remaining inside them.

9. Cap and Log

So your ecobrick is packed as solid as possible— now it's time to cap

it! First, be sure your ecobrick is **not** packed to overflowing. There should be about 1-2cm between the cap and the plastic inside. The cap (HDPE) is made of a different type of plastic than the bottle (PET) and is the weakest part of the ecobrick. If plastic is even slightly pressing up against the lid, the pressure will inevitably crack it over the years. Also, be sure to avoid flip-tops or sports caps when sealing your ecobrick as they are fragile and will break easily over time.

Once capped, it is time to record your ecobrick! Recording your ecobrick's key data an important part of ecobricking whether you're doing it on your own or as part of a community.

The ecobricker's name

The final weight

Date and year

By recording the weight, you can tally up all your ecobricks and calculate the total plastic you have kept out of the environment.

10. Inscribe

Avoid using paper labels, tape, or stickers to record the data. These methods will last for several years at best then fall off.

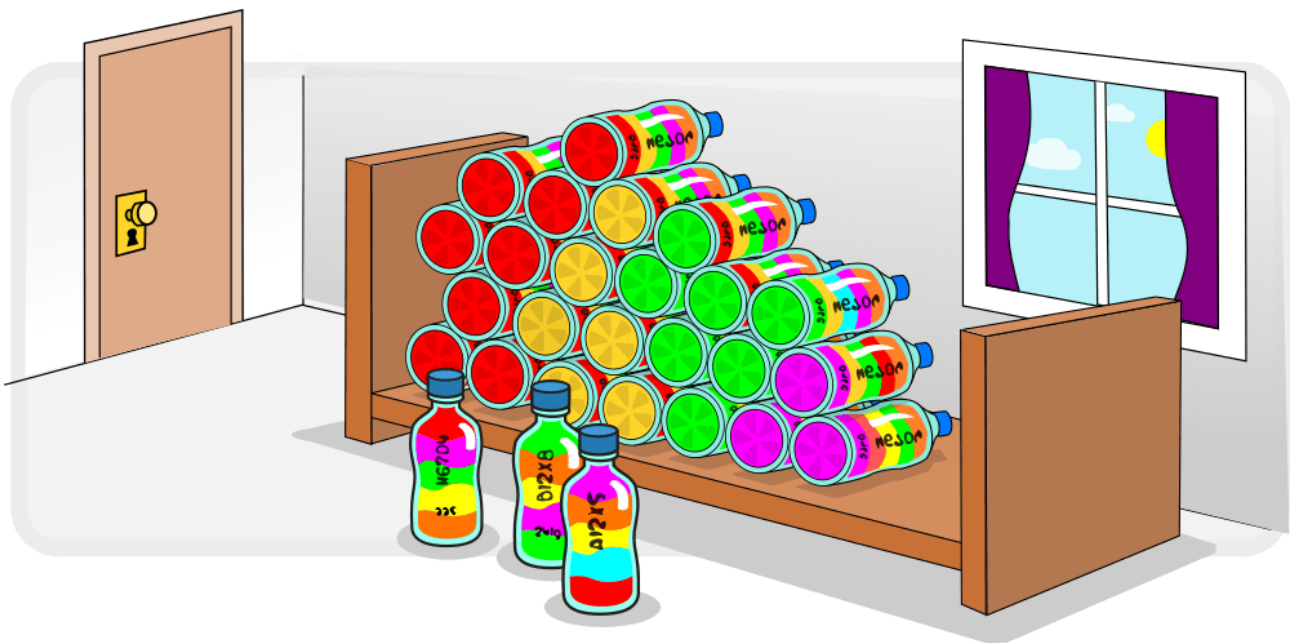
Avoid using permanent markers. Not only does their writing not last long on PET, they are made of non-recyclable and non-ecobrickable materials. Enamel paint usually comes in a metal can or glass jar. These containers are effectively recyclable.

Use a paint brush to carefully and clearly inscribe the ecobrick's data. The paint bonds to the plastic and is almost impossible to remove. Use contrasting colors like white and black to make your inscription stand out.

Nail polish is a form of oil paint and also permanently inscribes the ecobrick. However, often the nail polish brush makes it hard to write legibly. Also the smell of the polish drying is strong.

11. Store your ecobrick

Once complete, you will need to store your ecobricks until you have enough for your project. Store ecobricks indoors, out of the sun. If possible protect with a cloth or tarp from accumulating dust and dirt (PET attracts dust and chemicals and is hard to remove). Stack horizontally, with the ends pointed outward. This enables you to organize your ecobricks by colour and brand— which later facilitates project planning and making. It's good to have the ecobricks raised slightly above the floor — rats have been known to chew away at bottles! Ideally, ecobricks are stored off of the ground (on a floor or raised on wood) and fully protected from the sun and the elements. Ecobricks are best stacked horizontally with their bottom pointed outwards.



Keep calm and stuff bricks...but I don't think you will find you have to store that many as they take time to create. By the time you have as many as 10 each I am sure we can have a project in mind and some storage space sorted....then we can get round to

Using Bricks

Ecobricks can be used for short or long term applications which balance

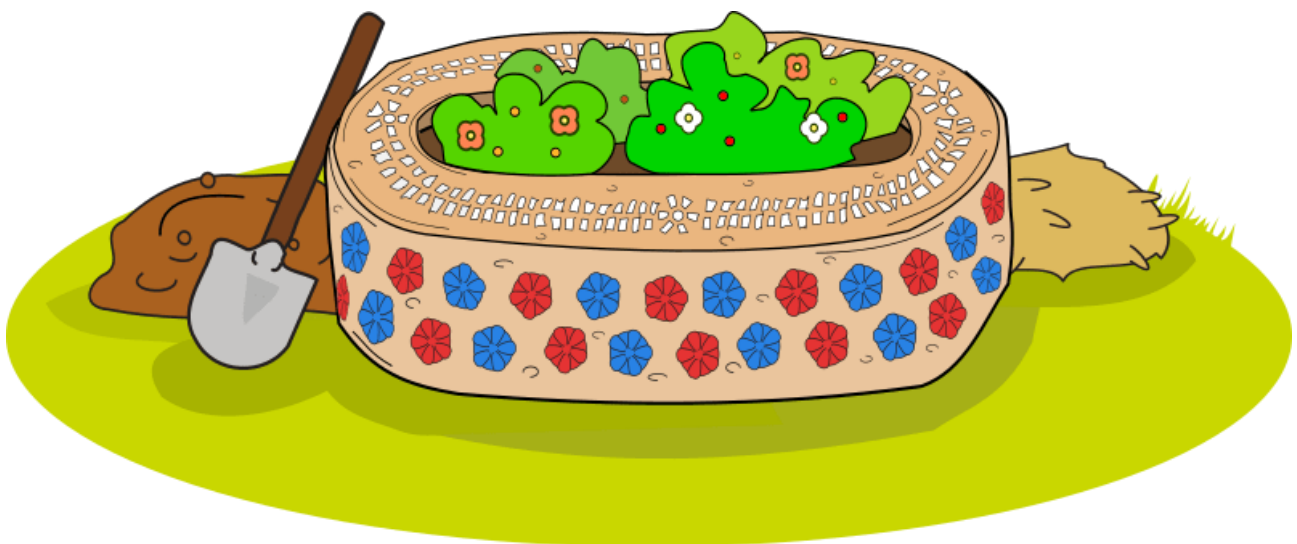
the benefits of utility and the securing of plastic.

Short-term Applications

Silicone or inner-tube-bands can be used as short-term, non-permanent attachment methods to create ecobrick applications that last for months and up to several years. As short-term applications are not usually covered up, they are typically for indoor use, in order to prevent the UV photodegradation of the bottles. As short term methods have less barriers to replicability, they assist the spread of the ecobrick social movement by empowering the makers. *The benefit of short-term applications are practicality, utility, replicability, social empowerment and the dissemination of ecobricking.*

Long-term Applications

Earth and Ecobrick building techniques are used to create structures that can last years or decades (it is not uncommon for traditional constructions to last centuries!). Earth mixes (i.e Cob (material), Wattle and daub, adobe) are used to lay ecobricks horizontally and completely cover them for full protection against all forms of degradation. The main benefit of long-term applications *is plastic sequestration— fully securing plastic from all forms of degradation for the long-haul.*



Benefits: could become the number one choice for structural building! This method is strong, earthquake resilient, allows curved walls and designs, allows ecobricks to be recycled at the end of the construction,

and relies only on 100% organic, locally-sourced materials that cost next to nothing.

Disadvantages: It's outside of the corporate construction paradigm: your bank won't give you a mortgage, insurance companies won't cover it, and your hands and feet will get dirty.

Next Life: Earth and ecobrick constructions disassemble eventually into crumbled cob mortar which can be returned to the earth without problem (or reused in another earth construction!). The ecobricks can be removed from the crumbled cob to be reused in any way.



Possible projects for the future if we have enough bottles? Raised beds for growing our own vegetables?



The LOCKDOWN AFTERNOON TEA

on Sun 26th April 2020 Afternoon.

Because of the Coronavirus Pandemic, the Afternoon Tea planned for that date by the St Nicholas Building Fund Team was cancelled. Then, although everyone was in Lock-down, it was decided to resurrect the idea with a virtual AT ie People to enjoy it in the privacy of their home! As luck would have it, the weather smiled and the sun shone. Hence many dined in the garden!

Some even connected to friends and relatives via ZOOM! Many sent photos as requested as can be seen in glorious colour! And it's not too late to send donations..... see Alison's email for Bank details.....



**KEN & ANNE
ALLEN**



**HARRY & DOT
BIRCH**



KAREN MURPHY



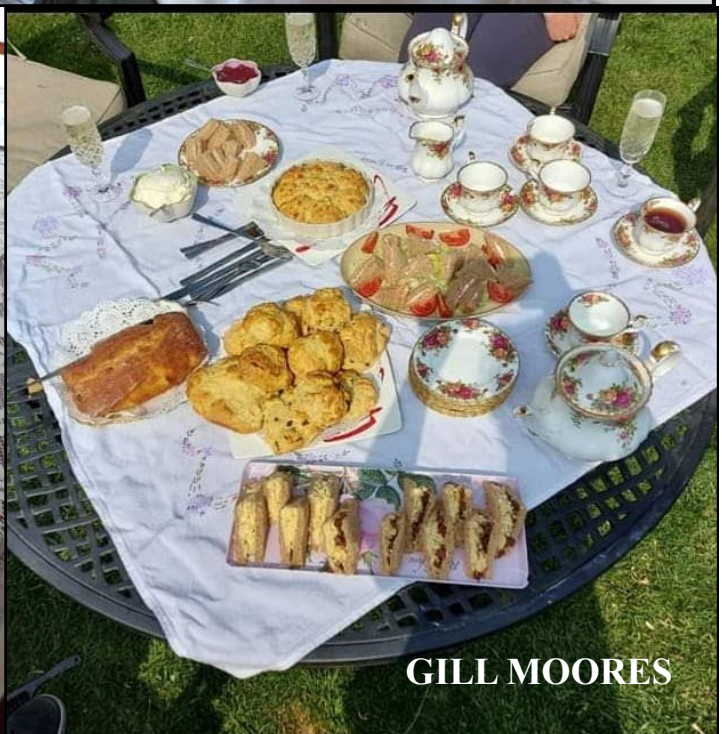
JANE and GEOFF



KATE & NICK



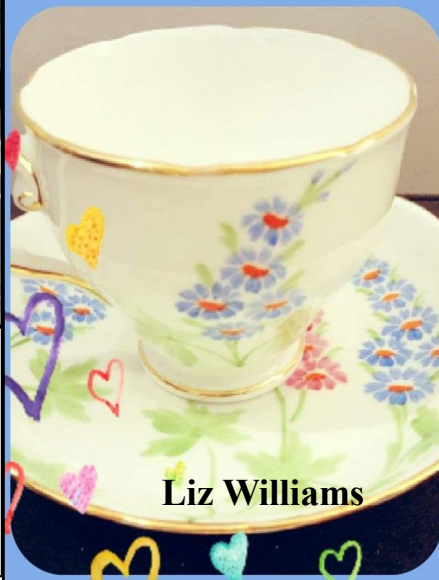
ALISON



GILL MOORES



Linda's Grand Kids



Liz Williams

Dear everyone,
Friends from St Marys/ St Nicholas mothers union and all who know me! am having my virtual tea party in the garden. hope you all enjoy yours. see you all soon. Liz xx



KAT & VANESSA



PhotoGrid



LINDA



PAM



TOM



PAM
COTTRELL



GILL MUIR