

When nature calls...

Google the phrase 'how to crap in the woods' and you will get back millions of results, all using various euphemisms. But, it is what is, as they say. Here, one of our regular contributors discusses the issue in more detail.

FOR those not in the know, the HSE are currently carrying out site visits to assess the state of play in UK forestry. Part of this will be to challenge the industry's long-held belief that providing welfare facilities is often not practical. The HSE website lists welfare facilities for transient work sites in the construction industry as including flushing or chemical toilets (one toilet to seven people), hand-washing facilities, and a seating area where clothing can be stored and where drinks and food can be heated up. While some aspects of forestry are of a scale that a mobile unit is appropriate, many of us will be wondering what's wrong with bringing a packed lunch, flask, waterproofs and sitting in the truck for lunch on a wet day?

The one thing we should be thinking about is what happens when we are caught short? Desperately needing the toilet is bad; finding human excrement in the woods is as bad as it gets. We've evolved a revulsion reflex towards it, which is very sensible because faeces can harbour roundworm eggs for up to two years, as well as norovirus, hepatitis and *Clostridium difficile* (more commonly known as C. diff), amongst other things. Put bluntly, don't crap in the woods and leave it there, it's not nice.

Being too embarrassed to discuss the toilet arrangements (whatever they may be) is probably the main reason for bad practice. However, you need to remember that if you engage people to work, they need to know where to go.

Obviously, portaloos are readily available from hire firms, but from an industry with such good environmental credentials, we can do better. Paying to bring a plastic box into the woods, mixing our poo with blue chemicals, and paying the firm to take it away again to be processed using precious resources (water) can be improved upon. We can use our poo, as nature intended, to enrich the soil with lovely fertile humus. Hu-manure!

In this article I'm going to talk about some of the ways to deal with our droppings by composting – for the sake of politeness lets call it manure. Pretty much every mammal on Earth goes to the toilet on the ground. The bacteria for breaking it down into useful nutrients are everywhere. We can help them do their job to our jobbies by following a few simple rules:

Rule 1 – Let your nose be your guide. Apart from initial smells, your heap should smell no different to any other compost pile.

Rule 2 – Contain it or cover it, no one wants to find it!

Rule 3 – Add a bulky carbon material to act as a home for the microorganisms. Woodchip, sawdust, leaves, and so on are fine, with a ratio of least four parts carbon to one part manure. I'll refer to this as soak or bulk from now on.

Rule 4 – Keep the compost dry and healthy. Anaerobic is bad, and will produce dangerous bacteria, see rule 1.

The first, cheapest, most accessible and least glamorous solution, needing hardly any explanation, is the site spade. Basically, dig a hole, about 10" deep, use it for a toilet and cover it again. This needs a conversation with the crew about a suitable secluded site, and ensuring everyone digs a deep enough hole so animals don't dig it up again. It's a common practice, and as long as the spade is always in the same place, if it's there then you know the toilet is vacant. The spade is only good for light use because it's not long before you run out of places to dig. It's also worth considering that most useful bacteria are in the top couple of inches of soil where



A woodland compost toilet; a joy compared to a plastic box.

composting takes place. Digging a hole and squatting isn't for everyone, but it is a short-term solution to the occasional emergency.

Next up is the bucket. Plastic or metal containers with snap-down lids can be sourced for free; with a toilet seat on top they become a ready-made compost portaloo. Put a good thick layer of soak in before use, and another good layer afterwards. Once filled, the container is taken away to be added to the compost heap. I know of tree surgeons that use this method successfully for site emergencies and have a contained compost heap for emptying at the yard. This is another short-term solution, for light use, which is a step up from the spade. Some people carry a container with lid and woodchip in their truck, 'just in case'. Interestingly, in Joseph Jenkins' great book, *The Humanure Handbook*, he suggests returning to the days of the night soil man collecting a valuable resource in sealed buckets!

For heavier use, but still movable, is the 'thunderbox', or contained composting

method. A toilet is built on a platform above an IBC (intermediate bulk container) or wheely bin. Lots of soak is added to keep it healthy as it's filled. Then, once full, the container is swapped for an empty one, and a handful of compost or activator is added to start the composting process. In less than a year it will be broken down into useable compost, and emptied ready for another cycle. These have become popular at music festivals as a more environmentally alternative to the plastic portaloo. There are several professional companies which will hire out units and take the sealed IBC away afterwards. It is more socially acceptable than either the bucket or the spade, and the platform can be as simple or fancy as you like. You could even add a grab handle to move it around the woods! This method means a bit of thought about where the container will sit for a year while composting takes place, and it involves some secondary handling. There is also the challenge of preventing too much liquid making it anaerobic (remember rule 4). Sometimes a urine separator is used with a separate tank; I'll come to this later.

The best solution for long-term or repeated use is the 'Treebog' or composting

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toilet. Here, a toilet is built on a raised platform so the manure can compost on the ground. The compost box is the important part; here the compost will stay and break down while roots from nearby trees and plants access the nutrients. The box needs to be sturdy enough to stop animals (or people) getting in. I've seen them made from double rows of chicken wire filled with straw, several made from slabwood/offcuts and lots of timber-framed palaces in great locations which are a joy to use. A well-made compost toilet will last many years, for very little investment and needing hardly any maintenance. Ideally, the box will be big enough that the manure will break down faster than it is filled, so in principle it will never need emptying. As a ball park calculation each visit, including soak, will add approximately one litre. Again, too much liquid can be a problem, though if it's sited somewhere sloping into the woods, liquid will drain away harmlessly. The true treebog (designed by J. Abrahams) has fast-growing willow planted around to control access nitrogen. The willow is cut regularly to keep the growth fast. Nettles will also do the same job. When compared to the four or five litres



That's the welfare facilities sorted then!

of water per flush, plus expensive plumbing needed for a traditional toilet, a composting one is a logical choice; I'm surprised they're not more common.

LIQUIDS

Most people that work outside are happy to nip round a bush, and we want to keep excessive liquid out of the toilets. But on a site with lots of people working, if everyone goes in the same place it will start to smell (rule 1).

Urine has many useful properties; gardeners often refer to it as HLA (human liquid activator), because it is so good to get a compost heap going. On its own, it is pretty benign stuff, and a hedge will happily act as a soakaway. A pissoir can be made from a pile of something to soak up liquid and compost away (woodchip, straw, etc). If use is heavy, then think about where the liquid will drain, or dig a shallow bund around. The urine and soak will start to break down quickly, without smells, then left where it is, or taken to use as fertiliser.

Hopefully, with a bottle of water to wash your hands, and a nice log to sit on for lunch, we've got welfare facilities sorted, so that the HSE can concentrate on the real crap that causes accidents. As the late Steve Dresser once pointed out, lack of toilet facilities isn't causing accidents; we should sort that out first.