

The Great *Indoors*

'Camping' at Home in Emergencies

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Britain's oil and gas reserves are shrinking and we are importing evermore energy. Our power stations are ageing and becoming more unreliable. One of the first features of the stress that the global peak in oil and gas supplies will cause is a greater unreliability of our large energy grids during periods of high demand. The knock on of this could be the disruption of the 'just in time' systems that deliver the food and goods we buy from shops. In this unit we arrive at the final purpose of *The Great Outdoors* initiative – using outdoor skills to live more comfortably at home when the power and/or gas supply goes off.

Be prepared!

Whilst taking around the *Energy Beyond Oil* presentation we heard an interesting story in the aftermath of the floods of 2007: With the water and power off to large parts of Gloucestershire many of those aged between 18 and 30 and living alone hadn't a clue of how to look after themselves. Without the capacity to help that many people social services hit upon a novel solution; "Go and find your elderly neighbours and look after them", they told the hapless youngsters. What actually happened was that the highly practical old folk, who'd lived through this type of thing before, were able to instruct the young folk how to look after themselves!

One of the central themes of the Energy Beyond Oil Project is that the last fifty years of consumerism has de-skilled us relative to our grandparents. People have lost the basic survival skills – cooking, keeping warm and getting by with very little outside help – that previous generations took for granted. In order to handle the problems that will arrive over the coming three decades we have to regain these skills. This is the core purpose of The Great Outdoors initiative – *go camping in order to re-learn the important, basic life skills that our ancestors took for granted.*

Long before we hit the real grinding difficulties that the peak of oil and gas production will create the highly technical and energy-dependent systems we rely upon will become increasingly dysfunctional. In developing countries people are used to regular power cuts, and so when it happens they just get on with things. In this country not only have we forgotten how to do without electricity, piped water and gas, but even a light scattering of snow can bring the country to a halt. As outlined in these guides, the best way to learn how to 'do with less' is to learn to camp. Now we turn this idea on its head by encouraging you to learn to *camp in your own home.*

Like camping outdoors thinking about camping at home in national emergencies takes a little thought. As noted on the last page of unit 1, the central idea of the initiative is that you develop a "camping kit" that you can



pick-up and go off with at any moment – but by keeping it together you'll also have the means to look after yourself should the electricity, gas or water fail! Basically the tools to live comfortably whilst camping outdoors or off-grid at home are the same. However, given that these events are unpredictable (not 'voluntary' like going camping) you need to apply the general principle of "be prepared!"

Putting a plan together

A few years ago some fire services started a new tactic in their educational outreach programme. They asked kids to think how they would get out of their house in a fire, especially at night, and then told them to go home and talk to their parents about it. Based upon anecdotal reports this simple idea has saved many lives because in the event of a fire everyone in the family knew how to get out of the building safely.



The first thing to think about is 'what are you planning for'. Even just the act of thinking how you will deal with a problem, like the house fires example above, can make life a lot easier when you're suddenly faced with an emergency. Although losing our electricity and water supply might be problem there are a variety of events – e.g. floods, fires, storms, severe heat or cold, computer/communications breakdowns and industrial action – that can make life difficult. To begin you should check at your library or go on-line to check what information your local council has on civil emergencies. Then check with the Environment Agency about the risk of flooding where you live (see the upper box over the page).

Planning for national emergencies, like storms and floods (which can interrupt energy supplies and disrupt transport), and interruptions to the energy grid due to failures of the system itself, are very similar to planning to go camping. You need to put together a kit of essential items to keep yourself warm, fed and entertained. Although we might feel secure in our home, the moment the lights go out and the heat goes off things can change rapidly. And so, like camping in different types of weather, you need to put together a kit that can cope with differing circumstances (see the lower box over the page).

It might seem a little eccentric to plan for these

Finding Out About Your Local Area

To begin the process just think about where you live and what might go wrong. For example, you might be able to survive the cold with a good sleeping bag but it won't hold back flood waters!

Information on the hazards in your local area can be found at your local councils 'Public Protection' or 'Civil Emergency Planning' departments (try a web search for your council's name and 'civil emergencies', or visit your local library). They have emergency plans that cover national emergencies, which should tell you who will do what, and they might also have details about local hazardous installations and their emergency plans.

Information on areas at risk of flooding, including maps, can be found from the Environment Agency's web site – <http://www.environment-agency.gov.uk/subjects/flood/> (put your postcode into the flood map system to get a view of your area, then click the '+' button on the top-left of the map to zoom in).

By being aware of what problems might arise in your area you can better prepare for emergencies.

The Home Emergencies Kit

The kit for the home is very similar to the kit for rough camping. The main difference is that whilst camping you try and minimise weight and space, in the home kit these are not restrictions. Practically it makes sense to expand your capacity to what's required for the number of people involved (e.g., large containers for storing/collecting water).

- **'Emergency' kit:**
 - ◆ Torch (plus batteries if required)
 - ◆ Matches and/or lighter
 - ◆ Candles and lantern/jar (to save batteries)
 - ◆ Large water bottles/carriers to store water
 - ◆ Large blanket/tarp and poles for shelter
 - ◆ Cooking stove (and fuel) and utensils/kettle
 - ◆ Emergency food (dried) in case you run out
 - ◆ Toilet roll/sanitary towels
 - ◆ Soap and detergents
 - ◆ Water purifying/taste masking compounds
 - ◆ Bucket and bin bags (to make a toilet)
 - ◆ Radio (plus batteries if required)
 - ◆ Small axe (but a saw is usually lighter option)
 - ◆ Small trowel for digging
 - ◆ String, scissors and hand tools
 - ◆ Plastic pipe (for syphoning)
- **'Warmth' kit (per person):**
 - ◆ Adequate warm *and* waterproof clothing
 - ◆ Sleeping bag ("2 season" minimum)
 - ◆ Foam roll or air bed (to camp in one room)
 - ◆ Spare blankets
 - ◆ Hot water bottle
- **Extras:**
 - ◆ A gas fire (propane/butane) and spare fuel
 - ◆ Essential medicines (to last a week or two)
 - ◆ First aid kit/anti-septic cream
 - ◆ Fire extinguisher (water or CO₂, not powder)
 - ◆ Storm kettle/wire mesh to cook over a fire
 - ◆ Needle and thread for repairs
 - ◆ Duct tape/epoxy glue for sealing leaks
 - ◆ Spare plastic/waterproof bags
 - ◆ Pencil, paper, whistle

events (statistically speaking it's far more likely you'll be caught in a flood rather than a terrorist incident, but, perhaps absurdly, terrorism seems to dominate the government thoughts in this area) but when the water board start digging up the road unexpectedly, hit the power cable and cut you off for a day or two, these skills come in really handy.

Losing heat and power is the greatest problem we face because so much of our life is geared around having these things available at the click of a switch. The electricity grid is most vulnerable between 4pm and 8pm because this is the period of heaviest demand. The problem is that if the grid goes down and doesn't come back then within a few hours the impacts begin to mount-up. In many areas drinking water supplies will fail because the pumps won't fill the storage reservoirs (tip: if there's a widespread power cut quickly fill your water containers, saucepans and bath with water). In many areas sewage is also pumped and so this too could begin to back up too.



Whatever your plan, the first thing to do when the grid goes down is to turn off anything that might have been switched on. For example, on older gas cookers (modern gas cookers have systems to prevent this) if the gas cooker was lit and the gas goes off, when the supply is restored it will fill the kitchen with gas! If the grid goes off for a long period it's also a good idea to unplug electrical devices, such as computers and TVs, as when the grid is brought back up the initial voltage spike could damage them.

Everything in the previous sheets is relevant to camping at home – the only thing that takes a little thought is adapting the information to suit the different circumstances. In the following sections we'll go through some of the main points.

Warmth and shelter

If you lose electricity in an all electric home, or if the gas supply fails, then you have to begin to conserve heat straight away. Move everyone into one room, preferably one with a heat source such as a gas (if it works) or solid fuel fire. Even if there's no heat source, the combined body heat of everyone living in a small space keeps it warmer. If you have gas or liquid fuelled heaters use them, but make sure you have enough ventilation otherwise you could die of carbon monoxide poisoning (tip: if you feel groggy or dizzy with a fire on, it's because you haven't enough ventilation). If ventilation is a problem heat hot water bottles, or fill containers with hot water, and bring them into the room instead.

If you haven't got enough blankets, food or heat sources for everyone, always prioritise the very old and the very young. Their metabolism and lower levels of body fat mean that they are more susceptible to cold than adults. If people become chilled then the warmest need to cuddle up with them under a blanket/duvet to keep them warm. As noted later, the best way to keep the body warm, especially for the old and young, is to keep well wrapped up and take hot food and drinks at regular intervals rather

than try to heat the room around them.

You also should try and sleep in the same room to keep warm (you are most vulnerable to cold in your sleep). You can use your camp bedding for this, and add to its insulation value by using your ordinary bedding on top. If it gets really cold then putting up your tent indoors and sleeping inside it, or erecting a tent-like shelter with a blanket or tarpaulin, can also save body heat because you create a warmer microclimate around your body.

Evacuation

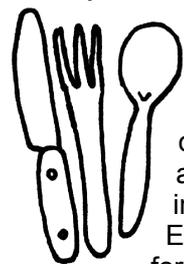
If your home is damaged then you'll have to shelter in those parts of the building that are not getting wet or are not open to the wind and cold. If that's not possible, for example during flooding, then pack-up what you can and move to another shelter, or take your camping equipment to open ground and pitch there instead (but try to find somewhere well above any potential flood zone – again, the Environment Agency's maps will provide this information).

If you have to leave your home due to flooding find somewhere to shelter away from the flood water. Flood waters can rise quickly, but the biggest problem is that wading through flood water, even in summer, can cool your body quickly, especially if you have to sit in the wet clothes afterwards.

As part of your plan if you have to leave you need to have an idea of where to go and how to get there. Friends or relatives nearby are the best option, but failing that you should find a location where you could camp and still access public services (e.g., a local park). However, if you need to move then other family members or friends need to know where you are so that no one "gets lost" in the chaos.

Food and water

Water and food are the most important things to organise after warmth and shelter. In the hours immediately after a blackout water supply could be problematic – which is why you should fill containers and baths with water the moment there's a large-scale power blackout. Within a day the emergency services should begin to organise water supplies, although from the experiences of the 2007 floods this could be limited and so you should concentrate on minimising use from the very beginning. If you have access to the countryside and can find alternative supplies of drinkable water, and you can purify it sufficiently, that's likely to be the more reliable option.



You could keep food for emergencies, but that's a wasteful option as it will spoil and needs replacing at regular intervals. The most ecological options is to routinely buy in bulk and always keep a few weeks food supplies in the house at all times (see the Energy Beyond Oil Project's 'food series' for the forthcoming sheets on bulk buying and food co-ops). If in normal times you can keep enough raw vegetables, dried and tinned food for a few weeks then you will be automatically secure if the shops don't open. The only thing you need to watch is how much you eat because, when you sit

and get bored, it's very easy to eat to pass the time!

If the power goes off in winter then chilled or frozen food will start to warm up. If it's very cold or snowy weather the best option is to put the food into bags and store in a chill box or insulated box outside. You should prioritise using this food over dried or tinned foods as it will spoil first.

Cooking is the most problematic issue because you need to have fuel – although using the fuel to cook something to eat is often more efficient than trying to heat the air in the room to keep warm. Ideally you'd use a petrol rather than a gas stove because once you've run out of fuel you can use a length of tubing to syphon fuel from cars to keep the stove running (involve the neighbours! – see later). If possible, when using stove, cook in a ventilated room/outdoors to avoid worsening the air quality.

If you have problems with fuel then you could always set an open fire outdoors and cook over it – as outlined in unit 3, *Heat and Fire*. Irrespective of what type of heat source you use for cooking you should also modify the way you cook to conserve fuel. To cook dried food and raw vegetables use a pressure cooker (with practice you can use pressure cookers on open fires) whenever possible. The best option after that is steaming food as it uses less fuel to cook. Frying is also possible on open fires, but you should try to conserve your use of cooking oil as much as possible because you could quickly run out (especially if deep frying).

The most secure option of all is to install a small solid fuel/wood burning stove in the home. You could use this ordinarily to heat your home, but when the grid goes down, especially if you can collect wood by hand locally, you can keep yourself and your neighbours warm. If it has a flat top or hotplate (or even just the plate that covers the top flue vent) you can cook on it too. Also, if you get a large cast iron casserole-type saucepan, you can put this on top of the fire and use it as an improvised oven.

Burning things

When you get cold and have no other heat sources the temptation is burn things. The problem today is that there is very little around that we can safely burn!



Most "wooden" household furniture is actually plastic coated chipboard, or its made from laminated wooden strips. Much of the rest of the material we find lying around the home is plastic, or it's coated with plastics. All these materials emit toxic and potentially asphyxiating gases when you burn them – and can be hazardous even when you burn them outside in the open.

Be very careful if you try to salvage things to burn. Paper and cardboard, although more difficult to use (they require a lot of raking over) are safer than burning plastic and wood composites. Even if using an enclosed wood burning stove, avoid anything that contains plastic because even if you don't choke in the room, outside the local air quality will become very bad very quickly and that will affect anyone with asthma or other breathing difficulties.

Toilets

If the power goes the water won't last long after that – in which case going to the toilet becomes a problem in urban areas. The simplest method of going to the loo is to line a plastic bucket with a heavy duty bin liner. When it's half-full you take the bucket outside, remove and tie-up the bin bag and put it in the garden or in a wheelie bin. The other option is to find a foul sewer hatch and empty the contents directly into the sewer system – but on modern estates the sewer hatches are locked. Don't tip the contents down road drains as they run directly to local watercourses and will cause severe pollution of waterways/other people's drinking water.

Always keep a good stock of toilet paper and other toiletries. Again, as with food, buying in bulk helps as you'll always have a stock in the cupboard (of all commodities, surely the most civilising material in an national emergency is toilet paper?).



Planning ahead

If the electricity fails your computer won't work (or your laptop might only have an hour or two of battery power, but your printer still won't work!). For this reason you need to keep hard copies of essential information (like these information sheets) which you might otherwise keep on computer. Likewise, if you keep all your contact details on a mobile phone, keep a paper record somewhere else in case your phone runs out of power or dies in the cold and damp.



The box earlier gave details of the “kit” suitable for the home. A lot of the components can be borrowed from your camping kit, but for the sake of certainty it's a good idea to have a box with candles,

matches, first aid kit and other essentials put away in a cupboard. Then, in an emergency, you'll know you'll have enough. What's essential is that you have some large water containers (certainly much larger than you might take walking or cycling) that you can fill with water – if the water is off for some time you'll need to collect water from tankers in the street.

The best preparation is to make your home as efficient as possible today. Fit insulation where possible, and draft excluder's/heavy curtains on the all the doors and windows to minimise the heat loss from your home. If you can fit a solid fuel/wood burning stove as a back-up heat source it's possibly the best option to get through an enforce period “off the grid”.

Perhaps the best form of preparation for an emergency is to go camping, and once you feel comfortable doing that try a little experiment at home for a day or two: go to your home fuse box and throw the switch; then (if applicable) go you your gas tap and turn the handle; then, having filled some water containers, turn off the mains water supply. Now see

how long you can last without being “on the grid”. It's a rather extreme day or two's camping, but it can be a lot of fun if you treat it for what it is – a *valuable learning experience*.

Don't 'go bunkers!' – invite the neighbours in

Whenever people talk about “emergencies” there's an obvious reference to the survivalist-type mentality; 'bunkering down' to survive societal collapse with your food and your guns. This is a short sighted view because it assumes that we can survive irrespective of what happens to everyone else. We have to work together for security, or, as was once put to a survivalist at an Energy Beyond Oil event, “bullets are a finite and non-renewable resource... *then what?*”.

If you have something valuable in an emergency – such as food, water or shelter – keeping it to yourself will attract attention (e.g., the apparent contradiction that the gated communities which the rich flee to in order to escape urban crime often become honey pots for crime themselves). The best way to protect yourself is to learn the simple and transferable skills required to live on little in emergencies and share them with your friends and neighbours. Through this interdependency it's in everyone's interest to look after everyone else, and through this network we can develop stronger and more resilient communities.

The larger and more densely populated an area is the harder it can be to make do without being connected to “the grid”. It's the development of large energy, water, sewage and food supply systems that has enabled the development of the modern, densely populated city; the loss of those grids will be instantly detrimental to the lives of people living there. The most densely populated areas are also, in an emergency, the most likely to receive support because the local government can most easily serve the greatest number of people quickly by concentrating on these areas. But even in these situations, being able to work as a resilient community will enhance the lives of those involved compared to relying just on what the emergency services can provide. For activities such as cooking it's more efficient to cook in bulk for many people rather than a few, and heating a room for ten people is more efficient than for three, making the available resources stretch further.

In smaller towns and villages the size of population, and the availability of land and resources (such as firewood and drinking water) within easy reach of the urban areas makes living off-grid for a few days easier. Working as a group of houses, or as a street, can again enhance the lives of all because the work can be divided up between those involved.

Most importantly, **don't be fearful**. Skills provide confidence and confidence dispels fear. If we can learn the basic skills to look after ourselves, come what may, our society will be a much better place!

