

**SOME TIPS ON PROTECTING YOUR HOME AND  
COMMUNITY  
FROM FLOODING**



There is no guarantee that any flood protection system will work and this advice does not endorse one product over another. If you buy a flood protection product, you are responsible for ensuring it is appropriate for your property, fit for purpose and correctly fitted.

It is always best to seek professional advice from a building surveyor, architect or other independent professional if you are considering flood protection solutions for your property. There is no formal assurance scheme for flood surveyors, but the Royal Institution of Chartered Surveyors and the Royal Institute of British Architects hold lists of members who have undergone internal vetting and adhere to a common code of conduct.

## Getting started

In the very beginning you need to be sure about how your house floods and where the water is coming from. Sounds simple, but people have protected their home with flood gates and flood proof airbricks just to find that the water has still come into the property through walls because of poor exterior pointing, neighbour's internal walls, up through the floor or internal drains/plug holes. They just hadn't noticed before because so much water came in through the doors. Make sure you have it all covered. Better still see if there is a way of keeping the water away from the property to start with by for instance directing water away from the home with sand bags or gel bags. If you are at all unsure it is worth employing a surveyor who can give you professional advice.



Whatever you buy, check if the product has been tested to a level approved by the British Standards Institute – these items should show the BSI Kitemark. The Kitemark tells you that the product has been tested to do what the company says the product will do. For further information on Kitemark flood products use this link.

<http://www.kitemark.com/products-and-services/building/flood-protection.php>

The Kitemark does not tell you if you are dealing with a reputable company it tells you about the product. If a company has a review facility, read what others have thought about the products, service and company.

A directory of companies selling flood protection products is available on line at <http://www.bluepages.org.uk> . There may be other companies that are not in the directory. You may also want to check for local companies that stock a number of different products from a number of companies so you can compare a number of solutions in one place.

## Flood gates.

Gates are made to a standard height of around 70cm/1m high, this is because holding water back to a greater depth can structurally damage your home due to the pressure of the water pushing on the walls. Most gates come in a variety of width fittings or can be extended using spacing posts joining together a number of gates.

Some flood gates available rely on a permanent frame being fixed to the outside of your property. If you live in a designated area such as a national park or conservation area or if you live in a listed building, you will need to check with the relevant local planning authorities to see if you are allowed to do this, as some restrictions may apply. There are gates available that don't rely on permanent exterior frames, such as the one shown below.



Although there are lots of different types of gates, what most have in common is that they rely on a rubber, foam, sealant or neoprene seals - so think ahead. These products usually get stored in a garage or shed and may not be used for a number of months, but all seals will over time deteriorate, get knocked or may even get a nibble from a mouse. Be sure to get a clear understanding from the supplier so that you know

- How long these parts are expected to last and how should be maintained and if they can be replaced?
- Can you buy and replace yourself or will that invalidate any guarantees?
- If the manufacturer does the replacement, how much is that likely to cost and how long will it take - will the cost of replacement be included in any guarantee?

At the more affordable end of the market gates start at around £370/400 for a standard door width and can go up to thousands depending on what you want. When working out the price, make sure you know about any additional costs to the purchase. Some companies will want to send out a representative to survey your property and will want to

install the gate to ensure it is fitted correctly. If you just buy the gate and intend to fit it yourself, check if any guarantees/insurances will still be valid. A square gate will need to fit into a square hole in order to work, so you may need to do some work to the exterior of your home to get a good watertight seal.

Ask to see a product before you make a commitment to buy, or if you can't do so, check the weight - make sure you can easily lift the product into place, some of the products are quite heavy, especially if you have to carry them any distance on your own. Make sure all the members of the family can manage to fit the product, you might not always be around to put the gate up.

## Airbricks

Whatever airbrick you put in place it may to some extent reduce the airflow in your home. If you are fitting airbrick solutions check whether you will need to install a carbon monoxide alarm in your home at the same time. If in any doubt at all seek advice from a specialist.



**Airbrick replacements.** You can replace your existing airbrick with one that has floats inside. There are a number of models on the market. When water first enters the brick the floats inside rise up and block the air holes preventing water from entering the property. These bricks will need to be cleaned from time to time to ensure they are free from anything that could restrict movement of the floats. They are good if you spend a lot of time away from the home as the protection is always in place. The cost for this type of product starts at around £40 for a small brick and goes up from there. If you don't feel confident enough to take the old brick out and install the new one, you will have to include the price of a builder doing the work - the supplier may offer this service at a cost. If you install yourself check this does not invalidate any guarantee.

**Airbrick covers.** There are many products that work by covering over your existing brick so the original airbrick can stay in place. There are 4 basic types,

1. A cover/plate which is attached over the top of your existing brick to make a seal when you know flooding is expected. Some are screwed into place others clip on. A small amount of work is needed to inset the housing for the screws to turn into or attach a frame for the cover to clip onto.
2. A permanent cover is fitted which raises the level of the air vents holes above the expected flood level.
3. A permanent cover is fitted which has vents into which you can fit bungs when flooding is expected.
4. A sticky patch is available which can be used in an emergency to cover the existing brick.

Most of the permanent covers have a finish that can be painted to match the outside of your home so they blend into your exterior décor.

Depending on how your home is constructed, and to what level the water rises, you may also be able to simply raise the level of the airbrick, but you will need check with a surveyor that this is appropriate.

Types 1, 3 and 4 need to be put in place when flooding is imminent. This means that if you leave the property for any length of time you will either need to have a friend or family on standby or you will need to install them before you go. It is dangerous to leave covers on permanently as you may cause a build-up of carbon monoxide in your home or cause damp/fungal problems affecting the structure of your home and perhaps your health.

The cost of covers starts from around £35/£40 and goes up from there. The sticky patches are available for around £15/20 but you would need to replace after each use.

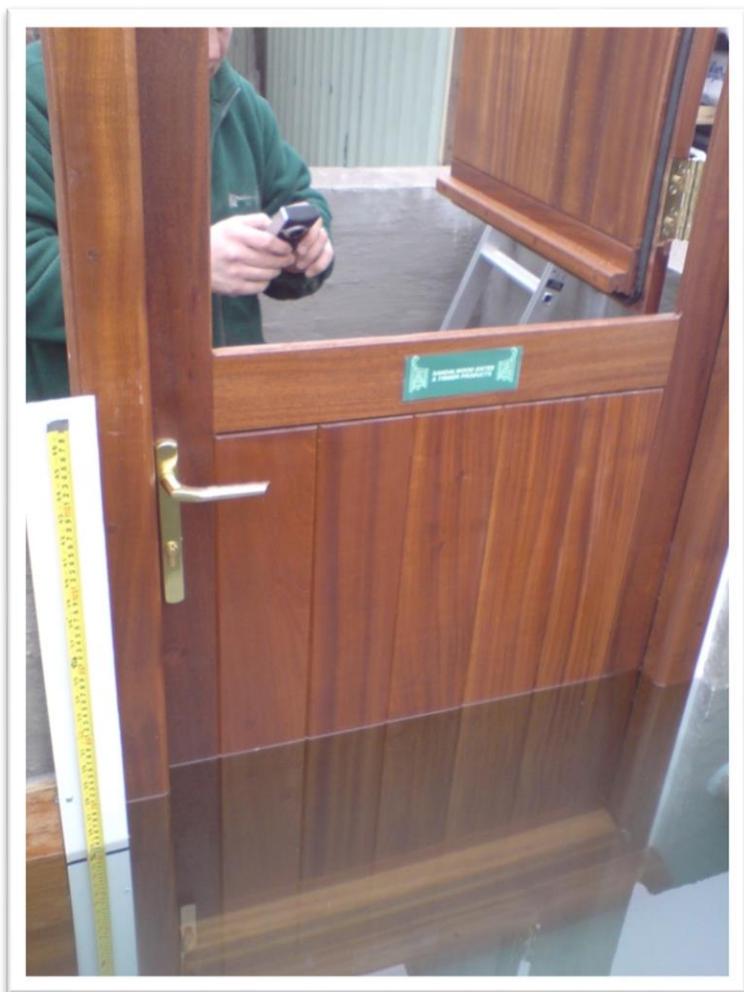
Permanent flood gates are available for exterior garden walls, which if you are lucky enough to have a good wall around your property, can help to stop water reaching your house. These gates are usually quite heavy, ideally you should have a specialist inspect the wall and probably fit the product too.



A variety of specialist flood proof walls are also available, if you want to protect an area that can be surrounded. This one is made from re-cycled plastic.

## **Flood doors**

Flood doors do just as they say they do, they replace your existing door and stop flood water from entering your property. The doors are great if your home may flood when you're not at the property – remember you have to be there to put up flood gates. Some doors are solid full length and some have a stable door style - smaller door in the top half that can be opened to evacuate someone from the property, without opening the full door, which would let the flood water in.



The doors are usually fitted by the supplier with the frame, to make sure they are watertight. Most companies will want to survey the property before supplying the door to check that they are the right solution and ensure the quality of the fit. If you intend to install yourself you would need to discuss this with the supplier in case it invalidates any warranty.

If you live in a designated area such as a national park or conservation area or if you live in a listed building, you will need to check with the relevant local planning authorities to see what you are allowed to install. Some authorities may insist on the door being made from wood - there are wooden flood doors available such as that shown above.

### Covering all bases.

Ok, so you have the doors and airbricks covered, but will the water pressure outside push water (and sewage) back up through your drains, sink or toilet?

### Drains/plug holes

The easiest way to deal with this is to put the plugs in place and then weigh them down with something heavy like a sandbag. If you're not confident of this working, you can buy non return valves or backwater valves, which allows water to leave the property but a flap shuts off the pipe when fluid flows in the other direction. The valves start at around £60 for a small version that would fit to a sink size outlet pipe. Unless you're a competent plumber, you will need to add in the cost for a survey and fitting.



Back water valves allow water to flow in one direction. When water flows in the wrong direction a hinged flap automatically closes and stops water coming back into the home

### The Toilet

Toilet pan covers are available which pop into the toilet below the rim and are then inflated until they have a snug fit which stops the water overflowing. They cost from around £60/70. You will also need a bicycle pump!



## **Pumps and generators**

Where the property is flooding from water coming up from underneath the property it is a bit more tricky. In some cases there is just nothing you can do, however other owners have been able to install pumps beneath the floor level, which can keep the water from rising up through the flood boards. Obviously this depends on how fast the pumped water is being replaced by flood water. Some pumps can be installed permanently or you can just put one in place when you need it, if you have good access beneath the floor. The pumps rely on electricity which quite often goes off in flood situations, so if you are going to install a pump it makes sense to also buy a generator. A generator should never be operated indoors, the fumes from the generator can kill, so make sure you have some shelter outside your home from where you can operate the generator (above flood water level).

Prices for a small pump starts at about £35 and prices for a small generator start at around £250. You will need to ensure that the pump is compatible with the output of the generator and that they will operate at a rate that is adequate to pump the quantity of the water that needs to be removed, your supplier will be able to advise you on the most appropriate equipment.

If you intend to pump very deep water from a basement, it is always best to consult a structural engineer in case any there is any structural damage hidden beneath the surface of the water.

Always be aware of where the water is being pumped to, as you don't want to cause problems for other residents/neighbours.

**Fumes from equipment powered by petrol or diesel can kill. Always use safely in accordance with the manufacturers guidelines.**

### **Sand bags/gel bags.**

Sand bags are difficult to store in a filled state, as the hessian sacks start to deteriorate quite quickly, although the woven plastic type of bags do last a bit longer. Some communities have collectively bought dumpy bags full of sand and have stored the hessian bags separately in a dry place ready to be filled if they are needed. This seems to work quite well. Sand bags are heavy to move, so having something like a wheel barrow to carry them into place is also useful.

Gel bags are much easier to store as they are light and small in their dry state.

In order for the gel bags to be usable they have to be held in water and given enough time to soak up enough water to expand to their maximum, so you may have to fill a bath or tub and hold them under. This only takes a couple of minutes. If you put them directly into situ – into flood water, you will need to weigh them down until they fully hydrate or they may move about in the water or even float away.

All bags whether sand or gel will have to be disposed of once they have been used as they will probably have been contaminated with sewage, so be prepared to have to throw them out and replace. Some of the gel bags are biodegradable and the contents can be dug into your garden soil. You will need to check if this is the case with the manufacturer. Gel bags are also great for soaking up any small amounts of water that enters the property.



Gel bags need to be soaked to absorb water before they can be used, unless you are using them to soak up water leaking into the house like a mop.



There are many types of gel bag. The picture shows a single gel bag – about the size of a normal sand bag and a set of 3 joined with carrying straps.



Although light to carry in their dry state, gel bags are heavy when fully soaked. If moving a few it's worth investing in a barrow.



Remember to use rubber gloves if gel or sand bags have been in contact with sewerage



Tie down anything outside of the house that might float away. Large items such as bins or wooden garden tables could form a blockage in a culvert or even under a bridge leading to more flooding downstream



There are quite a few DIY-ers out there that have made their own flood gates and airbrick covers, successfully protecting their homes. Some of the simplest solutions can be just as effective as purchased solutions.

If you can't lift your furniture – give it some welly!

## **Community/personal flood plans**

If you live in an area that is prone to flooding, it is good to have a personal flood plan in place so that you are organised and not in a spin trying to think about what you need to do if you're about to flood. For instance do you know how to shut off your electricity, water or gas supplies? You can find a template for a plan on the Environment Agency website.

It is also good to join together with others to have a community flood plan in place. These plans say what the community and volunteers will do before, during and after a flood. Community volunteers can assist those about to flood and more vulnerable members of the community.

The Cabinet Office also recommends that communities prepare a plan for emergencies wider than a flooding event. Their website has a number of advice sheets and a template for completing a full resilience plan for your community.

The important thing is that the plan works for your community so you may want to work with elements of both plans, or create your own version.

To find the template for Environment Agency's individual and community flood plans use these links

<https://www.gov.uk/government/publications/community-flood-plan-template>

<https://www.gov.uk/government/publications/personal-flood-plan>

For the Cabinet office template for a full resilience plan that looks at other threats as well as flooding use this link

<https://www.gov.uk/government/publications/community-resilience-resources-and-tools>

## **Flood packs**

Just in case you should have to leave your home in a hurry it is always good to have a pre packed grab bag - ready to go. Bags can be bought off the shelf but you can put your own together. The kinds of things people put in their bags as essential are:

First aid kit

Emergency cash and credit cards

Essential prescription medication / repeat prescription forms

Important documents/passports/insurance details

Toothbrush/toothpaste

Brush

Children's essentials (milk, baby food, sterilised bottles & spoons, nappies, wipes, nappy bags, clothing, comforter, teddy or favourite toy)

Wipes/antibac gel (remember you may come into contact with sewage in the flood water).

Copies of important contact details/numbers

Chargers for mobile phones and mobiles  
Radio with spare batteries  
Torch  
Camera to record damage for insurance purposes (digital cameras are best)  
Bottled water (check use-by date)  
Non-perishable food items (including energy or cereal bars)

### **Warning services**

If you live in a flood risk area where warnings are available, you should really sign up to receive the Environment Agency flood alerts. These will be sent directly to phone numbers of your choice. They will warn you when flooding might occur, when it is expected and when it is going to pose a significant risk. To sign up for this service, call the Floodline number 0845 9881188 or 0345 988 1188. You will need to have your post code to hand.

For a guide to the flood warning service use this link

<https://www.gov.uk/government/publications/flood-warnings-what-they-are-and-what-to-do>

For those who live outside of a flood warning area, the Met Office also issues 3 levels of weather warnings, which covers all areas. You can sign up to receive email warnings for a particular region. Visit their website for more information. [www.metoffice.gov.uk](http://www.metoffice.gov.uk)

### **Flood alert systems**

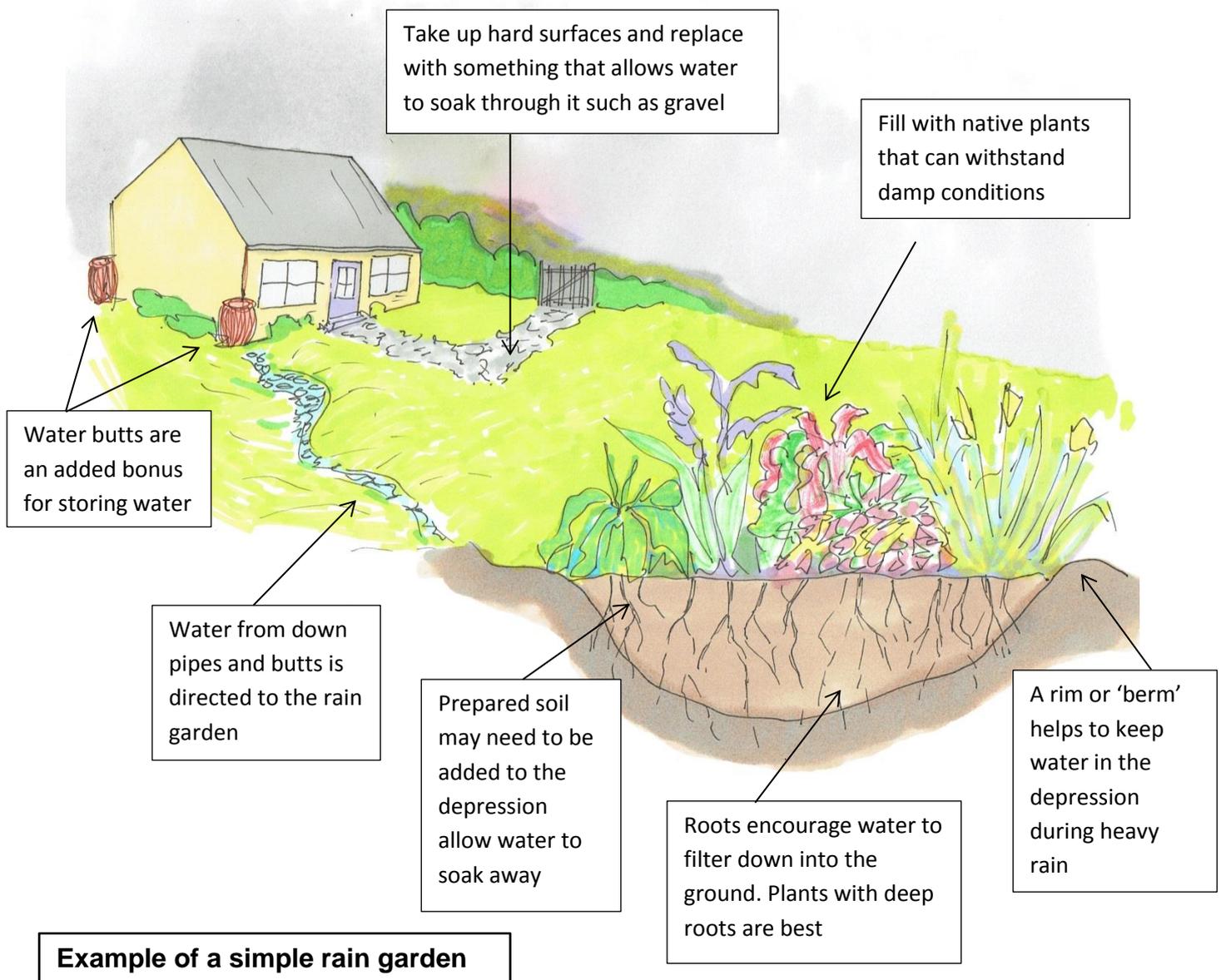
Some communities that are not able to get flood warnings from the Environment Agency are now raising funds and installing their own systems. The costs start at around £2500. The systems are fitted into the watercourse and send a telephone message to one or more telephone numbers when the water reaches a certain level. Some systems require an annual fee for maintenance.



## How you can help to reduce flooding in your community.

You can help to decrease the effects of storms and run off by taking up hard surfaces such as drives and patios, and replacing them with a porous surface such as gravel. This allows water to soak away more quickly. A porous form of tarmac is now available.

In other countries many residents have now developed rain gardens that are able to store water and direct it away from properties. This is now catching on in the UK. At its most basic a rain garden has a shallow depression into which the rain water will collect. The depression has free draining soil and is filled with plants that can withstand temporary flooding. These gardens reduce the volume of water running off from impervious surfaces into drains and onto roads. If you are interested in making a rain garden visit the RainGardens.info website <http://raingardens.info> where you can download a free guide to creating a garden.



## **Water Butts**

It's also very helpful if you have a butt to gather water off your roof. Although this seems like it wouldn't have much of an impact - if 4000 homes (the population of a medium village) each installed a 200 litre water butt (cost around £30.00 - £40.00 each), that would have an overall effect of being able to hold back 800,000 litres of water. That volume is equivalent to one third of an Olympic sized swimming pool - it can make a difference.

## **Keep your drains healthy**

Oil, fat and grease should always be put in a bin, not down the sink. Greasy liquid hardens as it cools down and when it accumulates it block drains. Always scrape your plates and pans into a bin before rinsing them.

Pop bathroom waste such as wipes and cotton buds into a bin and you can save yourself the time, cost and experience of clearing a blocked drain. Many items that claim to be 'flushable' such as cleansing wipes and make up wipes can block your drains, it's best to bin them.

For further information on keeping your drains healthy visit [www.loveyourdrain.co.uk](http://www.loveyourdrain.co.uk)

## **Useful Information**

Some useful numbers to keep handy or store in your mobile phone.

**Northumberland County Council Call Centre 0845 600 6400**

(or use your local number if you know it).

**Environment Agency Floodline 0845 9881188 /0345 9881188**

**Northern Powergrid 0800 668877**

**Northumbrian Water Limited emergency number 0845 7171100**

**For blocked drains or problems  
with sewers call Northumbrian  
Water Limited. For blocked  
gullies on the highway call the  
Council.**

**English Heritage.** If you live in a listed building English Heritage has online advice and 2 publications that you will be able to download

- Flooding and Historic Buildings Advice Note
- Flooding and Historic buildings Summary Document

<http://www.english-heritage.org.uk/professional/advice/advice-by-topic/climate-change/flood-risk-and-advice>

**Living on the Edge** is a leaflet produced by the Environment Agency sets out the rights and responsibilities of owners of water courses.

<https://www.gov.uk/government/publications/riverside-ownership-rights-and-responsibilities>

**Flooding: What to do before, during and after a flood** is another Environment Agency leaflet which is a good basic guide to what you can do to help yourself.

<https://www.gov.uk/government/publications/flooding-what-to-do-before-during-and-after-a-flood>

**National Flood Forum** is a national charity dedicated to supporting and representing communities and individuals at risk of flooding. They do this by:

1. Helping people to prepare for flooding in order to prevent it or mitigate its impacts
2. Helping people to recover their lives once they have been flooded
3. Campaigning on behalf of flood risk communities and working with government and agencies to ensure that they develop a community perspective.

<http://www.nationalfloodforum.org.uk/about-us>

**Cabinet Office** has developed a resilience toolkit to help communities become more resilient and able to help themselves in an emergency situation such as flooding. There are a number of helpful documents on their website.

<https://www.gov.uk/government/publications/community-resilience-resources-and-tools>

If you do not have access to the internet, contact the organisations above directly and they will advise you on how to obtain a copy of the information.