

Always seek the advice of drainage experts and work closely with environmental agencies and your near neighbours, before starting any practical works.

- Constructing raised beds may be a more practical solution. Their extra height will provide free drainage and could lift the growing area above the height of any floods. They could also create a dam that will slow the flow of water through the site. Check your tenancy agreement and speak to your landlord before doing so, just in case there is a clause prohibiting such action.
- There are no quick fix solutions for planting in land that has been recently flooded. If it is winter flooding young fruit trees or bushes that have been recently planted may have been ripped out of the soil. Always consider that it may be better to wait until the following autumn before replanting. If the trees or bushes are worth saving it may be safer to repot them and nurse them through the summer.

Rebuilding the Soil

- Soil that has spent days underwater suffers immediate loss of nitrogen which is accompanied by a build-up of harmful gases such as methane and ethylene. The structure and condition of the soil is seriously damaged and there is no quick fix remedy to the problem.

- The soil has to be allowed to drain completely before beginning the task of digging it over and adding as much organic material as possible. The top of the soil may be covered with a dark silty layer; this can be dug back into the soil unless there is local knowledge that it could be harmful. Just rough digging the allotment using a spade and leaving the soil in large lumps will help the recovery. The compacted soil needs to be opened up allowing air to enter the soil and start to bring it back to life.
- Consider sowing a short term green manure such as rye grass to dig in to rebuild the soil structure and fertility. If you can't get any well-rotted manure, woodchips or local authority green compost, use shredded newspapers, leaves or anything that will feed the worms and help to rebuild their populations.
- Check the soil pH and top dress with garden lime if you need to or better still use calcified seaweed just this once because it will help sweeten the soil for the worms. Get in a stock of pelleted chicken manure and liquid seaweed these will all help to gradually rebuild the soil structure over the summer.

In the case of a shortage of organic material plan to apply mulches on the surface of the soil all next summer, it will help to make a little go a long way. There is no need to rush the job as the ground will be cold and sodden for a while yet. Sandy soils will drain more quickly and heavy clay soils will hold on to the water the longest. A few trenches dug around the plot will help to drain the soil water away.

For the latest up to the minute information on flood warnings contact: **FLOODLINE**
Tel no: **0845 988 1188**
E: nfwc@environment-agency.gov.uk
W: www.environment-agency.gov.uk/flood

When taking out insurance always check to confirm exactly what is protected and equally as important what isn't covered by the policy in the event of flooding.

Become a member of The National Allotment Society

Membership of The National Allotment Society comes with a raft of benefits, from discounts on horticultural products through to initial legal advice and horticultural expertise. To become a member visit www.nsalg.org.uk or call **01536 266576**.



Flooding on the allotment and in garden



Flooding can destroy years of dedicated work in an allotment or garden; and with scientists predicting that climate change will continue, we should expect to experience more frequent flooding in the future.

The following notes have been put together with the flooding of allotments and gardens in mind. We can't prevent flooding but we hope this leaflet will help gardeners to be better prepared.

On the allotment and in the garden

- Turn off any exterior electrical supply in the garden and unplug any electrical equipment e.g. greenhouse heaters. All portable electrical equipment should be stored above the anticipated flood line.
- Check that all exterior taps have non-return/anti blowback valves fitted to them. They should have them fitted any way to prevent contamination of the mains water supply. Turn off the mains water supply to the site or garden.
- To prevent manhole covers, and drain grills from being lifted weigh them down with sandbags or any suitably heavy object. If they are lifted there is the risk of pollution and the holes becoming "man-traps".
- Remove anything that is valuable or light enough to float away and store it on higher, dry ground.
- Anchor and reinforce fruit cages or take them down if it is possible and time permits. At least raise the side netting and tie it to the top of the frame. Clear the soil of clothes, frames and bean poles and store them somewhere safe and dry.
- Harvest all crops that are ready. They will be unusable after the flooding.

Sheds and greenhouses

- Store any power tools and equipment high up out of reach of the potential flood waters.
- Empty the fuel tanks on mowers, rotavators, cultivators, strimmers and hedge cutters. Take them somewhere dry and secure.
- Turn off any gas cylinders and remove the heaters from the flooding area.
- Remove any fuels, weedkillers, pesticides, disinfectants, wood preservatives, paints, solvents and lock them away somewhere safe and dry. The containers could become damaged and the contents leak out posing a pollution threat to local watercourses.
- Remove bags of growing compost, fertilisers, lime and store them on higher, dry ground. Secure all

wheelbarrows, tools, watering cans and buckets inside a strong building or remove them from the site.

- Try to make all outbuildings as strong and secure as possible. Close and secure all doors, close and secure all ventilators, louvre panels and windows. Try and protect the bases of greenhouses by packing them with sandbags or something similar.
- Harvest all greenhouse crops.

Health and safety

For insurance purposes do not throw anything away and take photographs of the damage. Record the height of the flood for future reference.

- Always wear wellingtons and disposable rubber gloves when clearing up after the flooding. The flood waters may have been polluted. Protect any cuts with waterproof dressings make sure that your tetanus inoculations are up to date.
- Keep off the flooded areas for as long as possible.
- Keep out of fast flowing water or still deep water. The water may be hiding sharp objects such as broken glass and other dangerous debris. Keep young children, pregnant women and anyone with a weak immune system out of the flood zone.
- Buildings that have been flooded pose a serious health risk. Only work in damp wooden buildings for short periods at a time because mould spores can aggravate chest complaints
- Take extra care when moving through the flood waters. Use a stick or cane to test out the area in front of and around you. There may be manhole covers or drain grills that have been blown off. Only enter the water if it is essential. It is much safer to wait for the water levels to drop.



- Don't enter any buildings or greenhouses until you have carried out an external safety inspection of the structure. They may have been damaged by the flooding. If they are damaged always get professional advice.
- The rising flood water will drive all sorts of wildlife in to allotment or garden sheds and greenhouses looking for shelter. Contact the local pest control officer, dog warden or RSPCA for help

Disposing of the flood debris

Because there is always the possibility that flood debris could be contaminated with sewage, chemicals, oils and solvents it is classified as 'controlled waste'. It has to be disposed of by specialist operators. Sometimes the local authority will deal with it directly or they may use approved contractors to handle the waste. It is best to phone the local environmental department for advice.

Wet sandbags, flood damaged bags of compost and fertiliser should be treated as 'controlled waste'.

Take care when clearing debris away from fences or walls. Always take care to remove the debris evenly from either side to avoid the potential risk the fence/wall being pushed over because of too much weight on one side.

Helping the allotment or garden to recover

Structures

- Fences, gates and other wooden structure will be damaged by long term exposure to water. Check to find loose boards, sections and damaged or rotting posts and replace them with new.
- The windows and doors of greenhouses and sheds will be swollen causing them to jam or warp. Unless it is an emergency don't try to force them open, wait until they have dried out before checking for damage. Once they can be opened, leave them open to dry and air the building out. Wash all of the structure with disinfectant

Soil

- Throw away any fruit and vegetables that have been under the flood water. Remove any layer of silt from the surface of the soil and wait until there is spontaneous weed regrowth to indicate that the soil has recovered.

- Waterlogged soil can make shallow rooting plants unstable and vulnerable to drought in dry weather. It can be a point of entry for root diseases and provide shelter for pests and diseases. Support any suspect plants and wait until the soil dries out before attempting any repairs.
- Most plants can survive a couple of days being totally immersed under water but the roots need oxygen to breathe and will die if left too long in cold, wet, airless soil; especially if its salty sea water. Digging a temporary drainage ditch around the plant may help to drain away some of the excess water.
- All depending upon damage to the roots it may take several months before plants can recover. In some cases the plants may die long after the flood water has gone.
- The weight of the flood water will compact the soil but wait until the soil begins to dry out before carrying out any remedial work. Deep digging will help to drain away the water and introduce lifesaving air into the soil. To avoid treading on the sodden soil always work from boards laid over the ground.
- There is nothing that can be done to overcome the effects of salt after sea water flooding. The soil will recover over time but lift any valuable plants and thoroughly wash the roots with plain water and repot them in large pots or tubs. Raised beds may be the only solution until the soil recovers (but talk to your landlord before constructing any).

Sowing and Planting

- Wet soil is cold soil it is best to wait until the first green shoots indicate that it is safe to think about sowing and planting once more.
- Wait for the danger of any more flooding to pass and allow as much time as possible for the flood water to drain out of the soil. Free draining sandy soils will drain much more quickly than water held in heavy clay soils. If your allotment site is situated near a river or watercourse it may have a high water table making it impossible for excess water in the soil to drain away until the river levels begin to fall.
- Installing drains is an expensive and disruptive operation; and they only redirect water from one area to another. It is important to make sure that solving one flooding problem isn't going to create another one for somebody else.