



The Regional Climate Change Partnership

Weathering the Storm – Saving and Making Money in a Changing Climate

A Practical Guide for Small Businesses
in the East Midlands

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This business guide has been produced by Climate East Midlands, the Climate Change Partnership for the East Midlands

It has been adapted from a concept originated and developed by the following funding partners within the West Midlands, in collaboration with the UK Climate Impacts Programme (UKCIP) and the Government Office West Midlands:

The West Midlands Climate Change Adaptation Partnership
Advantage West Midlands
The Environment Agency
Business Link West Midlands
DEFRA

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How to use this guide

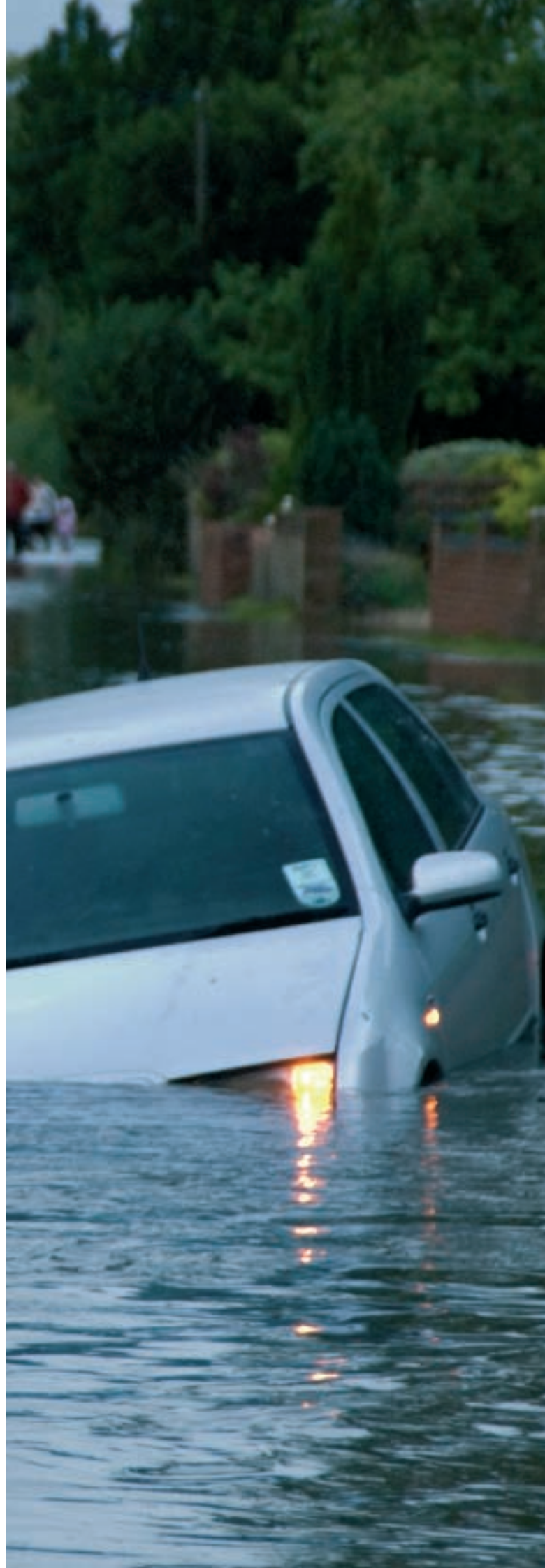
This guide has been produced for small and medium businesses (SMEs) in the East Midlands. It will help you to understand how you could be affected by weather, including extreme events, and how you can improve your chances of a quick recovery. The guide also sets out business opportunities from responding to a changing climate, and provides useful tools and contact information.

To get the most out of this guide:

- **Read the introductory sections on why climate change is relevant now, what the key impacts can be and what is in it for your business.**
- **Read the section on how to prepare for extreme weather events. This is split into topics such as insurance, your premises and your people. For each topic, the guide asks a series of questions to help you think about how you might be affected and identifies a series of simple and low cost actions you could take.**
- **Do you need more advice?**
Refer to the tools and contacts section.

The information in this guide has been focused on actions that are relatively easy for small businesses to achieve, tackling issues that are within your control or influence. You might not be able to stop flooding or an extreme storm event affecting your business, but you can take a few simple steps to reduce the impact these might have on your business so that you can remain operating. The list of suggested actions is not exhaustive and ticking all the boxes does not guarantee you are resilient. You must consider your specific circumstances.

There may also be opportunities that organisations can take advantage of, including identifying new markets or products through to saving money from effective resource efficiency. Further suggestions on how to identify these are presented towards the end of the guide on page 16.



What do I need to know?

What are the effects of a changing climate likely to be?

More frequent and severe flooding

The majority of flooding is caused by heavy rainfall which can lead to rivers bursting their banks or drainage systems being unable to cope with the volume of water. In the East Midlands, under medium emissions (based on UKCP09 socio-economic scenario ranges, see page 18), the estimated increase in winter rainfall is 5 % by the 2020s.

The floods of 2007 cost Lincolnshire County Council £1.85m in roads and property damage, closed 6 schools and caused bus services to be cancelled or delayed. They also caused disruption to major infrastructure such as the closure of the M1 at J30.

Do you know if your business (or key employees' homes) are in a flood risk area? If so, would your business survive a serious flood? How would electric and computer systems, stock and machinery be affected? How long would it take to recover?

Hotter summers

In 2003 and 2006 we had extreme summer temperatures in the East Midlands. The heatwave in 2003 killed about 2,000 people in the UK and the frequency of hotter summers is expected to become more common. Increasing temperatures have also softened road surfaces and disrupted travel connections.

In the East Midlands, it is estimated that the average summer temperature may increase by 1.4° C by the 2020s (based on UKCIP socio-economic ranges).

In urban areas hotter summers may lead to the urban heat island effect - where buildings and other developments retain heat, adding several degrees to the temperature in built up areas. For your business, this could affect working conditions for staff and cause equipment to overheat. Increased temperatures could also affect agriculture, changing the growing season and the types of crops that can be grown. It may also change the nature of pests and diseases.

Drier summers

A 6 % reduction in summer rainfall is predicted by the 2020s which, combined with increased temperatures, could result in more droughts in the East Midlands. Water shortages in the summer could become more frequent. If stand pipes were introduced in your area, how would this affect your business?

Domestic rainwater harvesting systems are being installed in new housing developments in the region; about 50 % of our domestic water needs can be met by capturing and recycling rain water.

Storms and wind

Storm events can cause severe short term impacts including disruption to services. The heavy snow in February 2007 closed 15 schools in Derby City. Northamptonshire experienced 66 extreme weather events between 1998 and 2008, causing the county council £1.33m of property insurance claims excluding costs due to loss of service provision and staff time.

There is currently no evidence to suggest that the frequency and severity of storms and extreme winds are likely to increase to the 2080s.



Are the weather and climate relevant to my business?

A review of weather across the East Midlands over the last ten years shows that we have already experienced extreme weather events. Some of these events have had devastating impacts on people's ability to go about their daily activities. Many of the events to date have been flood related and we may see more of these events, or a wider variety of impacts, as our climate changes.

- The East Midlands has the third highest number of properties at risk of flooding in any of the English regions and is fourth largest in terms of area at risk of flooding.
- In the past 5 years over 300,000 small and medium sized enterprises (SMEs) have been affected by flooding, costing them approximately £864 million in damages.
- An ABI* study revealed that 80% of businesses that do not have an emergency plan in place do not recover from a major incident such as a flood, even where insurance is in place to cover financial losses.
- AXA* research indicates that the average length of business interruption by flooding has increased from 8 months in 1996 to 14 months in 2005 as businesses become more complex and flooding more frequent.
- The 2007 floods cost East Midlands farmers tens of millions of pounds in lost crops, with several individual farmers losing half a million pounds each. Losses were in vegetables and potatoes in Lincolnshire and Nottinghamshire, and combinable crops (wheat, barley, oil seed rape) and grass where the rain fell heaviest (NFU).
- According to the Farm Practices Survey 2008, 26% of farmers are adapting to climate change by taking advantage of the longer growing seasons. 48% are taking action to combat climate change (Farming Futures survey, 2010)

Preparing for a changing climate makes good business sense. Experience in the East Midlands has shown that extreme weather could have some serious consequences for your business operations: not just for your premises and staff, but also by disrupting your suppliers, distribution or customers.

*ABI – Association of British Insurers

*AXA – worldwide leader in financial protection



What can I do to prepare?

So, what's in it for my business?

Like any other issue facing your business, it is important to understand how extreme weather and climate change impacts could affect you. Planning ahead rather than responding reactively will help you to:

- **Save your business money in the long term;**
- **give your business the best chance to continue to operate and meet customer orders, in spite of the weather; and**
- **identify possible business opportunities e.g. new products or services, reduced costs etc.**

What can I do to prepare?

Understanding how your business will be affected by weather and climate change impacts is a crucial first step, but what should you do next? The following pages cover some common issues, questions to ask yourself and where to go for more information.

A number of these issues are common to all SMEs, regardless of your business sector. However, agriculture, horticulture and other rural businesses may face different challenges to urban businesses and therefore we have provided a separate section on page 13.

We have focused on actions that are relatively easy for a small business to achieve, tackling issues that are within your control or influence.

Whilst some of the actions will have an initial cost they should save you money in the long term.

The case study on this page shows how a company adapted to the threat of water shortages.

Case Study: Silver Mist Nurseries

As a result of climate change and increasing demands on water resources in the UK there is a need for increased water storage capacity and more effective water management.

RDPE funding (Rural Development Programme for England) has supported the construction of storage reservoirs near Boston in Lincolnshire with a total capacity of 3.5 million gallons. These collect and recycle roof rainwater to feed a state-of-the-art water irrigation system at Silver Mist Nurseries.



Photo © Jonathan Billinger and licensed for reuse under Creative Commons Licence



Photo courtesy of Leicestershire County Council

What can I do to prepare?

Insurance

Ask yourself:

- **When** did you last check that you have the insurance you need?
- **Are you covered** for floods and storm events?
- Do you have business continuity cover **if your business is interrupted**?
- **Does your insurance policy** replace new for old or have limits for repairs?

Take action:

- Check your insurance cover **at least annually**. Confirm that you have a policy that covers the full value of your business and keep documents safe from weather impacts (and store copies off site).
- Check that buildings and content insurance covers flooding and storms.
- Check if you have **business continuity insurance** that will cover you whilst you cannot do business.
- Catalogue your assets (could include photographs or video).
- Make sure that the **period of time that you are insured for** is adequate. In the case of a major flood, for example, there can be long delays while property dries out and affected customers return to do business with you.

Further information:

- Check with your own insurance broker for more information, or contact the Association of British Insurers (ABI) at <http://www.abi.org.uk> or **020 7600 3333**, or the Federation of Small Businesses (FSB) on **01253 336 000**.
- The link below provides information on the types of insurance SMEs may need, including property, employees and financial risk (Insurance for Small Businesses: A Guide To Protecting Your Business): <http://www.abi.org.uk/Information/Business/40507.pdf>
- There are other **types of insurance** you can consider such as: **engineering insurance** to repair/re-instate machinery and computers; **goods-in-transit insurance** to cover goods whilst they are being moved; **frozen food insurance** which covers you if there is a failure of the public electricity supply; **others** such as glass insurance, cancelled event insurance etc.

Don't forget to take into account the length of time an insurance payment could take and potential cash flow problems. A loss adjuster may need to visit.

NOTE: If your property is not fully insured for the right sum, but only 50%, say, then you will only be paid 50% of your claim. Some companies waive this condition for buildings, so it is important to check!



What can I do to prepare?

Premises

Ask yourself:

- Do you know if you are in an area at risk from flooding or flash flooding? Remember that climate change means that risks will change.
- If you are currently located in a flood zone, do you have appropriate **flood defences** (for example, sandbags, plywood or metal barriers)?
- If you are moving premises, check whether the location is within a **flood zone**.
- Are you about to sign a **long term lease agreement** which would make it difficult to relocate? If you are, have you checked if you can afford the **relevant insurances**, including business continuity insurance.
- Do you have the equipment to **clean up** after an extreme weather event? Are you able to purchase this now?
- If your premises are damaged by extreme weather, think about re-instating it to a **higher standard of resilience** to prevent the same damage happening again.
- Have you considered whether you could operate from **alternative premises** if you had to?
- Are there mutual weather warning systems that you could share with neighbouring businesses? Can you share alternative suppliers, accommodation, etc?
- How well do your buildings and building services cope with high temperatures?
- Could increased chances of subsidence affect your business?
- **Prolonged clean-up operations arising from stormwater contaminated with sewage is a particular problem for restaurants, takeaways, doctors etc.**

Take action:

- Before you sign a lease, make sure you are comfortable with the lease conditions. If you are in a flood risk area, consider the length of the agreement and potential implications.
- When upgrading your premises, for whatever reason, consider ways to make your property more resilient to severe weather. You could, for example, consider relocating to a lower risk area (higher ground, not on a flood plain, etc).

Further information

- The following Environment Agency publications also provide further advice on how to prepare for a flood: <http://publications.environment-agency.gov.uk/pdf/FLHO1007BNET-e-e.pdf> and “Would Your Business Stay Afloat”: <http://publications.environment-agency.gov.uk/pdf/GENE0408BNYL-e-e.pdf>
- The Met Office provides weather forecasts – Tel: 01392 885680. <http://www.metoffice.gov.uk>
- Ask your plumber for advice. A list of local plumbers in the East Midlands can be found here: <http://www.yell.com/s/plumbers+merchants-east+midlands.html>
- More information is available on the repair and restoration of buildings following extreme weather at CIRIA’s (Construction Industry Research and Information Association) website: <http://www.ciria.org/flooding>

Do not assume that because the Environment Agency does not identify your area to be at risk of flood that you are not. You may still be at risk from flash flooding, surface water or groundwater flooding.

Other practical measures you can take include:

- Move electrical sockets to above the flood level and separate electrical circuits.
- Lay ceramic tiles on the floor and use rugs instead of fitted carpets.
- Use lime plaster instead of gypsum.
- Fit stainless steel or plastic kitchens instead of chipboard.
- Position main parts of a heating or ventilation system upstairs, above the ground floor.
- Consider replacing vulnerable wooden window frames and doors with synthetic ones, but seek advice for listed buildings or conservation areas.
- Fix floodboards to window and door frames.
- If you are in a high flood risk area, fit back-flow devices to drains and sewers.
- You can check the Environment Agency's website to identify if you are in an area at risk of flooding from rivers. Enter your postcode at the following web address:
<http://www.environment-agency.gov.uk/homeandleisure/floods/31650.aspx>
- You can also sign up to the Environment Agency's free 24 hour Floodline Warnings Direct Service. Warnings can be sent by phone, text, email, fax or pager. The more warning you have, the more time you have to prepare and protect your business. **Tel: 0845 988 1188 (Floodline).**
Email: enquiries@environment-agency.gov.uk
Web: <http://www.environment-agency.gov.uk/homeandleisure/floods/38289.aspx>
- Plastic covers can stop flood water coming through air bricks. Equipment such as pumps, driers and dehumidifiers will aid the clean up after a flood. If you have these prior to a flood it will save you time. Consider sharing the cost of equipment (e.g. a water pump) with your neighbours.
- Sandbags and pre-prepared plywood or metal barriers can reduce flooding around doors. Using a blanket or silicone sealant around the barrier can also help. If sandbags are in short supply you can buy your own sand and bags or use pillowcases/plastic bags. However, note that a flood may contaminate these items with sewage so they should not be reused. Alternatively, demountable flood defences are also available.
- Check buildings maintenance, gutters, drains and culverts.



“ Well, I'm pretty much the same as everybody else really. We lost vehicles, stock, we lost our office stuff and everything else, and emotionally it was really hard to come to terms with losing 35 years of business. ”

(Source: Climate Change and the Effects on Small Businesses in the UK, AXA, 2006)

What can I do to prepare?

People

Ask yourself:

- Are your **staff vulnerable** to extreme temperatures (heat and cold), have you considered risks such as fainting, injury and reductions in efficiency?
- Do your staff have any **medical conditions** (such as high or low blood pressure, heart disease, epilepsy or diabetes) which might be made worse by **extreme temperatures** (hot or cold)?
- Have you considered other people that could be at risk, such as nursing or expectant mothers, outside workers, manual workers who are physically active, kitchen staff or staff operating equipment or machinery, or any who may slip or fall?
- Are there any areas where **slips and falls** could occur during extreme cold or rainfall?

Further information

- The NHS provides advice on the risks of heatwaves and how to prepare: <http://www.nhs.uk/Livewell/Summerhealth/Pages/Heatwave.aspx>
- The HSE provides information on work place temperature requirements: <http://www.hse.gov.uk/temperature/index.htm>
- See UKCIP brochure (Climate Change, Heatwaves and Preparing Your Business): <http://www.ukcip.org.uk/images/stories/smes/Heatwaves.pdf>

Take action:

- Identify individuals with medical conditions and increase awareness of the impact of extreme temperatures amongst staff.
- Ensure that you have identified your legal obligations and understand your liabilities with respect to working conditions in the workplace. See link to Health & Safety Executive (HSE) on the left, including thermal comfort and outdoor working.

In very high temperatures:

- If the task allows, encourage workers to wear suitable summertime and comfortable clothing to work to minimise discomfort.
- Install thermometers and identify cool areas.
- Insulate high temperature pipes and plant.
- Ensure there is good ventilation and encourage regular breaks (provide water and ice).
- Moving workstations away from direct heat and fitting external shutters can help reduce glare.
- If you do not have suitable air conditioning equipment and do not wish to install it, consider other ventilation and working-from-home options.

In very low temperatures:

- Ensure that you have grit/salt supplies and that adequate gritting of access routes is undertaken in snowy and icy conditions.
- For outside workers, increase breaks to avoid hypothermia and consider other measures such as cold weather clothing.
- Encourage staff to wear appropriate footwear to prevent slipping on ice.

Photo courtesy of Leicestershire County Council



Utilities

Ask yourself:

- If your **pipes** freeze, are they vulnerable to bursting?
- What would you do if your business was cut off from the **mains power supply**?
- Do you know how to turn off the **gas, electricity and water** supplies to your business?
- Does your business depend on **water**? If there was a drought and a resulting hosepipe ban or other restrictions, would you be able to continue to do business? **Water companies have a legal duty to supply households, but not businesses.**
- How will your business be disrupted if your phones don't work?

Take action:

- Talk to your plumber on ways to avoid burst pipes or reduce the damage.
- Consider alternative power supplies such as solar or standby/back-up generators. There are grants available for energy-saving/energy efficiency projects which will save you money on energy bills in the long run and also make your business more resilient to power cuts.
- Talk to your suppliers to find out how to turn off the water, gas and electricity to your business. By turning them off before a flood or storm, you may reduce the amount of damage.
- Consider alternative water supplies, such as installing water tanks to store rainwater. This can also save you money and help reduce your carbon footprint.

Further information

- Gas suppliers in the East Midlands: <http://www.yell.com/ucs/UcsSearchAction.do?keywords=gas+suppliers&company>
- Electricity suppliers in the East Midlands: <http://www.yell.com/s/electricity+suppliers-east+midlands.html>
- Water suppliers in the East Midlands: <http://www.yell.com/s/water+suppliers-east+midlands.html>
- Business Link – offers free, independent advice and brokerage through its Improving Your Resource Efficiency Programme, and provides information on available support and grants for energy efficiency projects. **Tel: 0845 058 6644**

“ Outdated and overloaded sewage and drainage systems will not be able to cope with sudden intense rain falls, adding to flooding costs in urban areas... ”

(Source: Climate Change and the Effects on Small Businesses in the UK, AXA, 2006)

What can I do to prepare?

Information technology and security of data

Ask yourself:

- Flooding, storms or power surges could damage computers and electronic files could be lost. Do you have a **back-up** and is it saved in a **safe, separate location**?
- If your computer were unavailable, what processes would be affected (e.g. orders, payroll, contacts etc) and would your business still function?
- What alternative arrangements do you have to access vital data?
- If your staff are unable to get to work, either because homes or working premises are affected by snow, floods or storm damage, can you continue to do business? Can they work from home, with access to IT?
- Is your server room vulnerable to extreme temperatures? Do you rely on air conditioning to keep cool, which can be vulnerable to power cuts?
- **Can you cope with lost orders and enquiries?**

Take action:

- Regularly back-up your computer files to disc or other saving device and store this in a safe place, separate from your computer's hard drive, ideally in a separate location.
- Check if your employees have **broadband** and other equipment at home to enable them to work from home if necessary.
- Consider getting a server with **remote access** so that key staff can access your computer files from any computer.
- Review the location of your key IT equipment to identify if it is at risk from increased temperatures and/or flooding.

Further information

- Seek advice from your hardware and software provider on how to back-up your files, and how to access your computer systems if they are damaged at your premises and how to access your computer files remotely.



“ If office temperatures reach 32° Celsius, productivity decreases by 29%. ”

(Source: Climate Change and the Effects on Small Businesses in the UK, AXA, 2006)

Photo courtesy of AECOM

What can I do to prepare?

Suppliers, logistics and delivery

Ask yourself:

- What happens if your **suppliers** cannot get to you because of weather-related disruptions?
- What would happen if you could not get your products or services to your **customers** because of weather-related disruptions to road, rail or air services?
- Perhaps your customers could not get to you?
- Do you **lease equipment or plant** which could be damaged at a customer's property? Would production come to a halt?
- What happens if your staff cannot get to work?

Take action:

- Consider alternative suppliers and/or increasing storage capacity to increase your ability to operate without deliveries.
- Consider **sharing suppliers** with similar businesses in your area.
- Think about how you get your **products to your customers** or how your customers get to you. Consider how the routes could be disrupted by extreme weather.
- Make sure the drivers of vehicles transporting your products are **experienced** and are aware of the risks of driving in extreme weather (i.e. through floodwaters, on icy roads or during high winds).
- If your staff drive for business, make sure they are aware of **procedures for driving** in severe weather.
- Alternatively, consider using teleconferences for meetings when you cannot deliver your service in person.

Further information

- Seek advice from your suppliers and other similar businesses to identify alternative options.



Understanding and responding to climate change must become 'business as usual' for insurers and those they work with. Failure to take climate change into account will put companies at risk from future legal actions from their own shareholders, their investors and clients

(Source: Lloyds of London. 360 Risk Insight Project - "The debate on climate change")

Photo courtesy of Leicestershire County Council

What can I do to prepare?

Products, processes, stock and raw materials

Ask yourself:

- Have you thought about where you store your **products, stock and raw materials**?
- Do you know how to contact your employees out of hours to get assistance in moving or protecting stock?
- Do you have any processes or products that are temperature or climate sensitive?

Take action:

- Raise your stock **off the floor** to reduce its vulnerability to a flood. Do not store stock in the basement if possible.
- Think about expensive stock such as plant and vehicles and whether they can be **relocated rapidly**.
- Know where your **drains** are and keep them unblocked.
- Empty **oil traps** regularly to minimise pollution in the event of floods.

Further information

- **Business Link** - offers free, independent advice and brokerage through its Improving Your Resource Efficiency Programme and provides information on available support and grants for energy efficiency projects. **Tel: 0845 058 6644**

Case Study: Nottingham Trent University (NTU)

Forward thinking has seen NTU introduce some of the greenest innovations seen in education. The £90m refurbishment of their Newton and Arkwright building has been designed with sustainability in mind, to reflect the University's long term commitment to environmental management. The scheme includes one of the largest sedum roofs in the country. Depending on the depth of the substrate, green roofs can retain 70-80% of summer rainfall and 25-40% of winter rainfall. By retaining and slowing the release of water in heavy rainfall, green roofs help reduce peak flows and provide flood protection services. They have been shown to reduce ambient temperatures in the rooms below by increasing reflectivity, shielding building materials from the sun, and through evapo-transpirative cooling. Conventional roofs have been shown to be 40°C hotter than green roofs on a summer's midday. With an area of approx 3,000m² planted with 13 different varieties of sedum, NTU's green roof enhances biodiversity in the city centre, providing a haven for insects and other wildlife whilst absorbing carbon dioxide and mitigating the heat island effect.

NTU senior managers met officers from the UK Climate Impacts Programme to discuss risks posed by a changing climate and after due consideration decided that these were manageable through proposed and existing actions, the sedum roof being one of them.



Photo courtesy of NTU

What can I do to prepare?

The agricultural and horticultural rural business

Ask yourself:

- The agricultural and horticultural sector faces a different, and additional, set of issues. These businesses are directly affected by climate, and extreme weather events can have a significant impact. Ask yourself how your business may be affected both negatively and positively by:
- Increased rain and increased flood risks.
- Reduction in quality and quantity of grass caused by lower rainfall and higher temperatures during summer (which may require supplementary feed for livestock).
- Reduced water availability (may affect yields of fruit, vegetables and cereals and ability to irrigate).
- Higher temperatures and increased carbon dioxide in the atmosphere (some crops may flourish).
- Changing climate conditions (could make it possible to grow alternative crops, including crops for energy).
- Increase in storm events could provide opportunities for increased water storage for use during water shortages.
- Higher summer temperatures and reduced cloud cover (could increase the risk of heatstroke and sunburn for livestock in open pasture).
- Higher winter temperatures and fewer days of freezing weather (affects vernalisation of winter cereals and formation of flower buds on some fruit trees).
- Higher temperatures (could increase the risk of pests and diseases in arable and horticultural crops) but could increase the demand for outdoor leisure and tourism, creating opportunities for diversification.

Take action:

- Think about current trends and potential climate changes and seek further advice – [see below](#).

Further information

- Farming Futures, a joint project between the NFU, CLA, AHRF, AIC, Forum for the Future and DEFRA, produces a series of fact sheets containing sector-specific advice on climate change. These explain the likely impacts, opportunities and challenges of climate change on each farming sector and suggest ways to adapt and combat climate change. They can be accessed at: <http://www.farmingfutures.org.uk/resources/factsheets>
- Refer to the Environment Agency's guidance documents for horticultural and agricultural business. http://www.ukia.org/eabooklets/EA_Climate%20Change%20Impacts%20Horticulture_Final.pdf and <http://www.environment-agency.gov.uk/business/sectors/32757.aspx>
- Going for Growth - Rural Development Programme for England (RDPE) Funding - Business Link offers free, independent advice and brokerage through its Improving Your Resource Efficiency Programme and provides information on available support and grants for improvement projects. Tel: 0845 058 6644.



Photo courtesy of the NFU

What can I do to prepare?

Emergency contacts and important documents

Ask yourself:

- Do you have a **list of contacts** that you can reach in an emergency? Do your employees have access to this list?
- Have you got a copy of your **important documents** saved in a separate location, for example insurance policies, accounts documents, product specifications, client details etc?
- Do you archive paper records off site?

Take action:

- Make sure you have **out-of-hours details** of your staff so they can be contacted in an emergency.
- Keep your important documents in a safe place. This will help to make an insurance claim move more quickly.

Further information

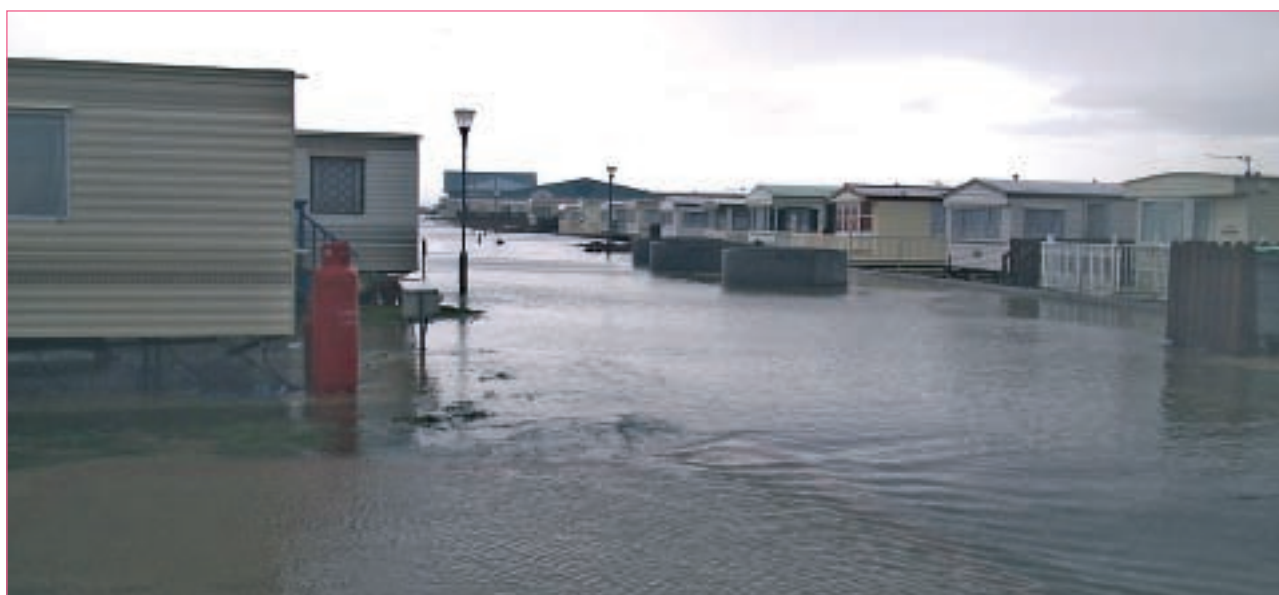
- A template list of emergency numbers is provided on page 10 of the Environment Agency document, *Preparing for a flood - Practical advice on what to do to protect you and your property*.

<http://publications.environment-agency.gov.uk/pdf/FLHO1007BNET-e-e.pdf>

Case Study: Lincolnshire Caravan parks

Two caravan park owners in Cleethorpes, Lincolnshire, have been working with their local Environment Agency office to put evacuation plans in place for their parks to ensure the safety of holidaymakers in times of flood. Both parks flooded in 2007, however, no evacuation plans were in place at the time. One of the parks, which has approximately 1,000 caravans, has now completed their flood evacuation plan and they have agreed to put flood evacuation cards in all of the caravans. They have also erected a flood warning board which is in full view of their holidaymakers so they are aware at all times if any warnings have been issued for the area. The second park has more than 2,000 caravans and the owner has agreed to produce an evacuation plan and follow in the same lines as the other site.

There are approximately 26,000 caravan sites on the east Lincolnshire coast. By caravan park owners working with the Environment Agency, Lincolnshire's Emergency Planning Team and other partners, simple and efficient options can be found to try to alleviate some of the dangers faced from flooding, and help to make caravan users aware of what they need to do in an emergency, better protecting the thousands of visitors to the east coast.



Cut carbon and reduce costs

Every company, no matter what its size, can save money on its energy bills by following some simple steps. Cutting energy use and saving carbon now will help to reduce further climate change in the future.

You don't have to invest lots of money or make big changes to your business to save on your energy bills. The right combination of small changes, many costing nothing, can reduce your energy bill by £1,000s.

Business Link East Midlands provides information on climate change and cutting carbon emissions and includes further information on advice and funding (see link on page 17). Also, seek advice from The Carbon Trust (see contact details on page 18). Here are some simple, no cost, energy saving tips for small businesses:

Case Study: Maxim Logistics Group Ltd, Northamptonshire

Following an on-site carbon survey by the Carbon Trust, Maxim Logistics Group Ltd used an Energy Efficient Loan to install new energy saving lighting for its main warehouse.

The changes have improved working conditions by making the warehouse brighter, whilst cutting the company's annual energy bill by almost 41 %. The company's monthly energy consumption has been reduced from 44,500kWh to 28,000kWh.

Issue	What can you do to save money and cut carbon at no cost?
Heating	Don't turn up the heating unless you really need to. Try to keep your thermostat at 19°C as your heating costs could increase by 8 % each time you turn the temperature up by just one degree.
Heating	Set controls. Programme your heating system controllers to allow for varying building occupancy throughout the week.
Lighting	Switch lights off in empty rooms. You could cut your lighting costs by as much as 15 % just by making sure you turn off lights in areas that aren't being used.
Ventilation	As simple as it sounds, making the most of natural ventilation through correct use of doors, windows and vents is a cost-effective way of achieving big savings on your ventilation.
Office equipment	Switch computers off. A single computer and monitor left on 24 hours a day could cost over £50 a year. Switching it off out of hours and enabling standby features could reduce this to £15 a year.
Refrigeration	Ensure your system is set at the right temperature. Even if it's 1°C lower than needed, your costs could rise by 2-4 %.
Motors and drives	Switch off motors and other power equipment when they aren't being used.
Boilers	Service boilers every year - a regularly serviced boiler can save up to 10 % on heating costs.
Compressed air	Find and fix leaks - a 3mm hole in your compressed air system could cost more than £700 per year in wasted energy.
Good maintenance	Equipment which is poorly maintained will not operate efficiently and will need more energy.
Knowledge	Make sure everyone knows that saving energy will help the company. Ask your colleagues for their ideas on how you could all save energy.

The Carbon Trust provides 0% interest business loans of £3,000 - £100,000 to help organisations finance and invest in energy saving projects. They also provide a 'Business Incubator' service, comprising up to £70,000 worth of consulting services to eligible applicants (including individuals and small businesses).

Opportunities for small businesses

The following table provides some examples of opportunities that small and medium businesses could consider, arising from a changing climate:

Markets	Finance	Logistics	Premises	People	Process
New products or modifications to existing products to respond to a changing market	Good risk management will appeal to financiers and insurers and other stakeholders, leading to reduced insurance premiums	Competitive advantage for companies with redundancy or flexibility built into delivery systems and supply chains or those undertaking business continuity planning	Maintenance of thermal comfort in winter months is less of a challenge	Greater comfort and lower fuel bills in winter	Agriculture: Longer growing season and new species and varieties of plants can be grown
Advantages for early movers in response to changed markets and lifestyles	Potential risks reduced and liabilities diminished through pro-active risk assessment and implementation	Supplying local markets creates an opportunity for a marketing approach based on regional distinctiveness or reduced product miles	Opportunities for high thermal mass building solutions, which can reduce air-conditioning requirements	Reputational opportunities of responding effectively as a good employer increases recruitment and retention of high quality staff	Manufacturing: Developing expertise in managing industrial processes and technologies in response to climate change
Increased passing trade in some sectors during long hot summers	Clients and customers attracted to businesses that can show they are resilient to climate change		Opportunities for those in built environment industries to develop expertise and reputation in climate-related building services	Opportunity to improve work/life balance by responding to climate change risks with flexible working hours and increased home working	Finance: New insurance products and services that spread the risk of climate change and incorporate underwriting that takes account of climate change
Increased demand for some products and services			Opportunity to exploit external spaces to accommodate outdoor living	Opportunities for recruitment, housing and service provision in areas away from urban centres, which could become more attractive	Construction: Fewer delays on site through frosts
More extreme events mean opportunities (i.e. maintenance services, repair, al-fresco eating facilities)				Generally more outdoor activity creates opportunities in some industries	

(Source: UKCIP, A Changing Climate for Business: business planning for the impacts of climate change, revised edition January 2009.)

Useful tools and further information

Who	How Can They Help?	Contact Details
Association of British Insurers (ABI)	ABI provide advice on insurance issues and have a range of insurance publications for SMEs	http://www.abi.org.uk Tel: 020 7600 3333
British Chambers of Commerce (BCC)	Your Chamber of Commerce can provide advice, support and guidance on climate change adaptation issues. Find your local Chamber of Commerce on the web site provided	http://www.britishchambers.org.uk/find-your-local-chambers/east-midlands Tel: 020 7654 5800
British Insurance Brokers' Association (BIBA)	Contact your own insurance broker for advice, alternatively contact BIBA who can help you find a member broker	http://www.biba.org.uk Tel: 0870 950 1790
Business Link East Midlands	Business Link provides free impartial, expert support and advice to businesses. Business Link also provides information on available grants, including those to improve your resource efficiency (Tel 0845 058 6644) and http://www.businesslink.gov.uk/bdotg/action/home?site=140 Business Link provides a guide to help you identify potential risks, make preparations and test how your business is likely to cope in a disaster. The guide can be found at this web address: http://www.businesslink.gov.uk/bdotg/action/layer?topicId=1074458463	http://www.businesslink.gov.uk http://www.businesslink.gov.uk/bdotg/action/home?site=140 Tel: 0845 058 6644
Cabinet Office	A toolkit to assist you to develop a business continuity plan is provided at this web address	http://www.direct.gov.uk/prod_consum_dg/groups/dg_digitalassets/@dg/@en/documents/digitalasset/dg_176447.pdf
Climate East Midlands	The regional climate change partnership coordinates action on the causes and consequences of climate change	http://www.climate-em.org.uk Tel: 07854 284588
Construction Industry Research and Information Association (CIRIA)	CIRIA provide information on the repair and restoration of buildings following floods	http://www.ciria.org/flooding
Confederation of British Industry (CBI)	The CBI helps create and sustain conditions in which business in the UK can compete and prosper. CBI provides advice on how to reduce your carbon footprint, case studies and information on climate change events	http://climatechange.cbi.org.uk Tel: 0207 379 7400
Department for Environment Food and Rural Affairs (DEFRA)	DEFRA is the lead central Government department on climate change adaptation and provides key information about flooding	http://www.defra.gov.uk Tel: 08459 335577
East Midlands Development Agency (emda)	Emda assists businesses to minimise potential impacts or exploit opportunities associated with projected climate changes	http://www.emda.org.uk Tel: 0115 9888300
East Midlands Improvement and Efficiency Partnership	Aims to forge closer relationships between 46 local authorities and 5 fire authorities to help bring lasting improvements to the East Midlands	http://www.eastmidlandsiep.gov.uk Tel: 0115 9774921
Environment Agency (EA)	The EA is the lead Government agency in England and Wales on flooding and broader environmental management. A checklist of relevant EA guidance and docs can be found here: http://www.environment-agency.gov.uk/static/documents/Research/Reporting_Power_guidance_checklist.pdf	http://www.environment-agency.gov.uk Tel: 08708 506 506

Useful tools and further information

Who	How Can They Help?	Contact Details
Farming Futures	Farming Futures is supported, amongst others, by DEFRA and the National Farmers Union (NFU). It provides a series of fact sheets and case studies on its web site, prepared for each farming sector: http://www.farmingfutures.org.uk/resources/factsheets	http://www.farmingfutures.org.uk Tel: 020 7324 3671
Government Office for the East Midlands	The Government Office for the East Midlands delivers Government programmes and initiatives in the region to meet local needs	http://www.gos.gov.uk Tel: 0115 9719971
Kitemark	Tested and approved flood protection products	http://www.kitemark.com Tel: 08450 765600
Mayday Network East Midlands	The Mayday Network is a collaboration of businesses taking action on climate change and resource depletion. Mayday businesses work together and with partners to seek out and promote the best solutions to the major environmental challenges we face	http://www.maydaynetwork.com/home/East-Midlands
National Farmers Union (NFU)	The NFU has various articles and reports on how climate change will affect agriculture and provides information by sector	http://www.nfuonline.com Tel: 024 76858500
National Flood Forum	A charity providing support and advice to communities and individuals that have been flooded or are at risk of flooding. The Blue Pages is a directory of builders, suppliers and other service providers who install or provide information on flood protection and resilience products: http://www.bluepages.org.uk	http://www.floodforum.org.uk Tel: 01299 403055
Natural England	An independent public body that works to protect and improve England's natural environment	http://www.naturalengland.org.uk Tel: 0845 6003078
The Carbon Trust	Provides specialist support to business and the public sector to help cut carbon emissions, save energy and commercialise low carbon technologies http://www.carbontrust.co.uk/cut-carbon-reduce-costs/pages/default.aspx	http://www.carbontrust.co.uk Tel: 0800 085 2005
The Met Office	The UK's national weather service, with forecasts available from its website. Forecasts are for anything from the next few hours to the coming season	http://www.metoffice.gov.uk Tel: 01392 885680
UK Climate Impacts Programme (UKCIP) Tools provided include: BACLIAT: (Business Areas Climate Impacts Assessment Tool) CLARA: (Climate Adaptation Resource for Advisors)	UKCIP helps organisations assess how they might be affected by climate change, so they can prepare for its impacts. UKCIP was set up by the Government in 1997 and is primarily funded by DEFRA. Tools that UKCIP have prepared include BACLIAT and CLARA for businesses and business advisors respectively. BACLIAT is a good starting point for exploring the implications of climate change for your particular business or sector. It comprises a simple checklist for assessing the potential impacts of climate change. CLARA is aimed primarily at helping business advisors to support SMEs in understanding and preparing for the impacts of climate change.	http://www.ukcip.org.uk Tel: 01865 285717 BACLIAT: http://www.ukcip.org.uk/index.php?id=82&option=com_content&task=view CLARA: http://www.ukcip.org.uk/index.php?option=com_content&task=view&id=534&Itemid=502
UK Climate Projections 2009 (UKCP09)	Explore the climate projections online. The key findings for the East Midlands are here: http://ukclimateprojections.defra.gov.uk/content/view/226/499/	http://ukclimateprojections.defra.gov.uk

Notes and useful information

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°Climate east midlands

The Regional Climate Change Partnership

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