Business Resilience in a Changing Climate
Introduction and Workshop Aims

Alan Carr
Sustainability West Midlands
07 July 2014
The Climate UK network

1. Sustainability East
2. Climate East Midlands
3. London Climate Change Partnership
4. Climate NE
5. Climate Change Northwest
6. Climate South East
7. Climate SouthWest
8. Sustainability West Midlands
9. Your Climate - Climate Change Partnership for Yorkshire and Humber
10. Climate Northern Ireland
11. Adaptation Scotland
12. Welsh Government

www.climateuk.net
Who are SWM?

• We are the sustainability adviser for the leaders of the West Midlands.
  – Government recognised ‘sustainability champion body’ for West Midlands.
  – Our Board is private sector led and cross-sector representative.
  – We are a not-for-profit company, that works with our members in the business, public and voluntary sectors.

• Our role is to act as a catalyst for change through our:
  – Policy advice to leaders - roadmap 2020.
  – Developing practical cross-sector solutions with our members,
  – Sharing success through our communications.

• 82% of our customers rated us ‘excellent to good’ in the delivery of our mission (2012).
• West Midlands Climate Adaptation Partnership
• The WMCAP is a network of adaptation professionals for the West Midlands who share success, knowledge and run projects across the public, private and voluntary sectors.
• SWM is currently delivering this programme on behalf of Climate UK and the Environment Agency.
• SWM organises meetings of the advisory group, deliver national and regional outreach events for local authorities and businesses and deliver all communications associated with the partnership.
Aims of Today

1. To discuss how severe weather has affected your business and to learn from responses that have been developed by other businesses.

2. To appreciate the range of support that is available, in particular from the Environment Agency in terms of flood alleviation.

3. To complete a Business Resilience Healthcheck for your organisation and to appreciate how this can help improve the preparedness of your business to the impacts of severe weather.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:15</td>
<td>Refreshments, registration and networking</td>
</tr>
<tr>
<td>09:30</td>
<td>Welcome</td>
</tr>
<tr>
<td>09:45</td>
<td>Introductions and Workshop Aims</td>
</tr>
<tr>
<td></td>
<td>Setting the scene: The importance of weather resilience</td>
</tr>
<tr>
<td>10:05</td>
<td>Discussion: How have you been affected by recent severe weather?</td>
</tr>
<tr>
<td>10:25</td>
<td>Case Studies: Some good examples of resilient businesses</td>
</tr>
<tr>
<td>10:40</td>
<td>Break</td>
</tr>
<tr>
<td>10:55</td>
<td>Resource Efficient Worcestershire Herefordshire Business Club</td>
</tr>
<tr>
<td>11:05</td>
<td>Case Study: Eco Business and Smarter Working Support</td>
</tr>
<tr>
<td>11:15</td>
<td>Flood Mapping and Warnings</td>
</tr>
<tr>
<td>11:35</td>
<td>Workshop: Business Resilience Healthcheck</td>
</tr>
<tr>
<td>12:20</td>
<td>Conclusions and Next Steps</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch followed by optional Tour of Worcester Bosch</td>
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<tr>
<td>13:30</td>
<td>Close</td>
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</tbody>
</table>
Adapting to Severe Weather: A Local Business Perspective

Alan Carr
Sustainability West Midlands
07 July 2014
Some Observations...

- 2003 – Record summer temperatures
- 2006 – Record summer temperatures (again)
- 2007 – Record summer flooding
- 2010 – Record cold December
- 2012 – Drought issued in the Midlands...
- 2012 – ...then the Wettest year on record in England.
- 2013 – Coldest March since 1962.
- 2013/14 – Record wet winter.
• **Summary:**
  – More heatwaves
  – Milder winters
  – More droughts
  – More flooding
  – More extreme events (inc. lightning)

• All of these changes could affect local businesses in some form or another.
Results of a 2011 survey showing how WM businesses have been impacted by severe weather:

• **Scale:** 74% of businesses impacted over last 5 years.
• **Cost:** 46% suffered costs of over £200,000.
• **Cause:**
  – 48% workplace related.
  – 47% transport and logistics related.
  – 21% damaged goods and supplies.
• **Figures likely to be higher since 2011 too...**
• **Benefits:** 29% reported increase in demand for services, e.g. grit, winter tyres, backup generators etc.
Why is responding important?

• **Heatwave 2003:** Cost UK economy £500m.

• **Floods 2007:** Cost UK businesses £740m.

• **Floods 2014:** could knock £13.8bn off the value of Britain's economy.

• “Estimated that every £1 spent on measures to adapt to climate change represents four times its value in potential damage avoided.”
Climate change will bring commercial opportunities as well as threats.

Businesses that have global markets or suppliers could be affected by climate change in other countries.

Some markets will expand and there will be new market opportunities, such as outdoor leisure, summer food, drinks and clothes and flood defence technologies.

Some industrial and agricultural processes and activities could become easier or more economically viable and winter heating costs will be reduced.

Climate impacts on agriculture in other countries could result in market opportunities for UK food production.

Many UK-based companies rely on manufacturing operations in East and South East Asia, where impacts such as an increase in the frequency of tropical storms and water scarcity are expected.
Setting the Scene 6
Business Impacts 2

Logistics
- Supply Chain disruption
- Just in time systems increase vulnerability
- Disruption to power or water supply

Processes
- E.g. food preparation and storage, chemicals, agriculture, server rooms, some industrial processes e.g. waterless printing etc.

People
- Poor (better?) working environment:
  - external: construction, agriculture
  - internal: offices in summer
  - more complaints generally
- Reputation

Premises
- Damage
- Subsidence
- Internal environment: less winter heating / more summer cooling

Financial
- Insurance issues/premiums
- Investment/future proofing
- Cost of repairs

Opportunities
- Expanding markets, e.g. Flood defences, blinds, clean-up services, permeable surfaces...
- Changing process, e.g. Longer growing season, less cold weather disruption, new products...
How do we Adapt?

- Assess where your business is **now**.
- Risk assess where you might be in the near and more distant **future**.
- **Prioritise** these risks.
- **Plan** what you can do about these risks.
- **Implement** responses.
- Take advantage of potential **opportunities**!
Assess Level of Risk
Keep it simple, especially to start with!
- Met Office / EA warnings
- Moving equipment upstairs
- Health and safety guidance
- Flood defences for premises
- Summer catering assessment
- Insulation
- Grit box and shovels
- Winter clothing
Your business does not need to do this in isolation!

- Work with other businesses and organisations in the room today and elsewhere.
- Speak to the Environment Agency and today’s speakers.
- Speak to SWM.
Your business does not need to do this in isolation!

- Business Resilience Healthcheck.
- Weathering the Storm.
- Example risk assessments.
- Environment Agency (Gov.uk) website
- Climate UK / SWM websites
- BSI – Adapting to CC Using Your BCP

**Business Resilience Healthcheck**
Business Resilience: Case Study Examples

Anna Bright
Sustainability West Midlands

07 July 2014
Case Study 1: Cleone Foods

Background:

• SME producing Jamaican “Island Delight” brand patties.
• Employ 50 staff who produce over six million products a year at a factory in Hockley, with an annual turnover of around £3m.

• Recognised for their Resilience Strategy by BITC and the Environment Agency with a local impact award in 2013:

“We believe that a responsible business must also be a resilient business, in order that it can deliver to its stakeholders and meet business objectives.

Resilience gives the business a competitive advantage over competitors not prepared for contingencies.

Resilient businesses can adapt and develop new opportunities and promote stability, personal security and long-term values, as well as competitiveness, at organisational and personal levels. Through long-term survival and profitable continuity they will achieve maximum overall return on investment.”
### Case Study 1: Cleone Foods

<table>
<thead>
<tr>
<th>Key risk</th>
<th>Risk Score /10</th>
<th>Contingency Plan / Steps to Mitigate Risk</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudden death or major illness of the Managing Director</td>
<td>10</td>
<td>Contingency plan in place - “sealed orders”</td>
<td>Managing Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Key managers already shadow/cover MD duties</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Other Senior Manager – long term illness or leaves the company without notice</td>
<td>8</td>
<td>MD and/or Project Manager to cover in short term</td>
<td>Managing Director / Project Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recruitment of replacement</td>
<td>HR Manager</td>
</tr>
<tr>
<td>Getting delisted from one of the major multiple retailers</td>
<td>8</td>
<td>Continued development of products and vendor relationships</td>
<td>Sales Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negotiated Elimination of competitors from multiple retailers</td>
<td>Sales Director</td>
</tr>
<tr>
<td>Major product contamination event/product recall beyond our control</td>
<td>8</td>
<td>Dependant upon nature of incident - Full product recall procedures prepared &amp; tested</td>
<td>Managing Director / Production Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Continual improvement of quality systems and manufacturing process</td>
<td>Production Manager</td>
</tr>
<tr>
<td>Key machine breakdowns or loss of public utilities such as gas or water</td>
<td>6</td>
<td>Co-manufacturing cover agreement in place with Shire Foods</td>
<td>Managing Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insurance - Business Interruption cover in place</td>
<td>Managing Director</td>
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<tr>
<td></td>
<td></td>
<td>Automatic Back-up Generator and uninterruptible power supplies</td>
<td>Maintenance Manager</td>
</tr>
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</thead>
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<tr>
<td>Fire, natural disaster, terrorism etc.</td>
<td>6</td>
<td>Full Sprinkler system, Integrated service linked fire and security alarms - Automatic gas stops</td>
<td>Maintenance Manager</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Insurance - Business Interruption cover in place</td>
<td>Managing Director</td>
</tr>
<tr>
<td>Catastrophic failure of IT / Data Systems, cyber attacks</td>
<td>6</td>
<td>Full firewall, &quot;Double data&quot; policy, onsite and offsite backups, mirrored hard drives etc.</td>
<td>Project Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UPS and supply filtering, 24 hr hardware replacement warranties, secure server room</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Supply Chain Disruption - Adverse Weather - Snow</td>
<td>4</td>
<td>Outsourced stockholding and distribution through 3rd party Consolidator</td>
<td>Production Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Snow Champion - Snow-plough and Gritting Equipment, Salt stockpiled</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Supply Chain Disruption - Adverse Weather - Rain / Flooding</td>
<td>2</td>
<td>Outsourced stockholding and distribution through 3rd party Consolidator</td>
<td>Production Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flood survey and plan completed</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Adverse Weather - Heat wave / Drought</td>
<td>1</td>
<td>All production, storage and office areas temperature controlled or air conditioned</td>
<td>Maintenance Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced water consumption through Resource Efficiency Measures</td>
<td>Production Manager / Project Manager</td>
</tr>
</tbody>
</table>
Case Study 1: Cleone Foods

First Action: Risk Assessment

Three highest risks to Cleone are related entirely to key staff and stakeholders.

**Firstly** – Single point of failure.
>> Have ensured more than one person knows how to undertake procedures.

**Secondly** – Physical issues, such as premises, utilities and equipment.
>> For example, have installed backup generators and “double data” systems for ICT.

**Thirdly** – Weather related disruption...
Example Response 1:

All company vehicles now carry a cold weather kit with tools, food and drink and a blanket.

Purchased a Forklift Snowplough Attachment and Grit Spreader, and now operate as a snow champion: in addition to their own site, which is located in a cul-de-sac, they clear the adjacent public road and turning head.

The equipment is then circulated on loan to other businesses on their estate to clear their own sites.
Example Response 2:

Since 2009, Cleone Foods has maintained a reciprocal co-manufacturing agreement with Shire Foods: a similar sized, non-competitive company within the same product sector.

Both have compatible plant and working patterns, allowing sufficient time to complete emergency production, without affecting their own output, by extending their opening hours.

In the event of closure of our site, both production components and commoditised ingredients can be delivered to their site immediately from supplier stockholdings. Within 48 hours, 80% of normal volume of products could be produced, which would be sufficient to satisfy major retail customers. 100% coverage should be achieved within seven days.
Case Study 2: F Ball & Co, Cheddleton, Staffordshire

Background:

- Produce adhesives and preparation products for the contract flooring industry.
- Located near to River Churnet and Cauldon Canal; history of flooding.
First action – Risk Assessment:
• A detailed flood risk assessment was undertaken identifying any point through which water could enter the property including pipes and drains.

Further Actions:
• Flood defence system installed consisting of an aluminium track on either side of a doorway and aluminium slats which slide into them and tighten into place.

• Flood barrier deployment team established.

• Signed up to the Environment Agency’s early warning alerts and their website enables them to stay one step ahead of Mother Nature!
Case Study 2: F Ball & Co, Cheddleton, Staffordshire

Further Actions:
• Back up computer system developed.

• ICT servers raised off the floor and onto plinths along with the sockets and extension cables connected to them.

• A company wide Business Continuity Plan was undertaken which now forms part of the company’s Management system.

• Training is ongoing to ensure that there is sufficient staff cover for all essential tasks.

Business Benefits:

- ✓ Flood awareness raised on site
- ✓ Prevention of damage to buildings/items at risk to flooding
- ✓ More reliable/efficient flood management systems
Break
Resource Efficient Worcestershire
Eco Business
West Midlands
NHS Heart of England Foundation Trust Research Group

- Small group – approximately 20 people
- Clinical research and drug trials
- Based at Heartlands
- Travelling to 3 other locations
- Project to implement cross site working
"The team from Coventry University Enterprises helped us to design, implement and monitor a new Cross-Site Working environment for the R&D Directorate, leading to more **efficient and productive working practices, reduced travelling** and **better use of office facilities**".

Bethan Bishop,
Head of Research & Innovation,
Heart of England NHS Foundation Trust
Lessons Learnt

- IT support has to be agreed up front
- Home and cross site working improved productivity
- Workload management is key
- Document and IT security
  - What can and cannot be taken across site?
  - Originals or copies?
- Constant review
Eco Business

• Support on Mitigation to complement adaptation.
• Co2g – Plastics Recycling company
• Promoting the economic, environmental and energy benefits of Recycling
• Targeting Councils – Saving public money and growing their business.
What can the Eco Business West Midlands project offer?

• 50% of up to 6 days consultancy (capped at £500 per day or as tendered)
• Follow on or separate grants of £2400 were spend is £7000+
What projects can be supported?

Those from Small to Medium Enterprises in the West Midlands on:

- Reducing energy bills
- Reducing carbon emissions
- Eco marketing and product development
- Reducing waste creation and to landfill.
Business Resilience to Flooding

James Turner
Flood & Coastal Risk Management Officer
07 July 2014
Environment Agency – What we do

• 2 main functions

– Environmental Management – pollution, water quality, permitting etc.

– Flood and Coastal Risk Management (on main rivers and coastlines)
Flooding – Different Sources

- **River Flooding (Fluvial):**
  - Prolonged or intense rainfall on river catchments - flows exceed natural channel capacity

- **Coastal Flooding:**
  - Usually a combination of high tides, low pressure surges & strong onshore winds

- **Surface Water (Pluvial):**
  - Rainfall generated: by overland flow before it enters a watercourse or sewer
  - Drainage generated: intense rainfall that exceeds the design standard of the drainage system

- **Groundwater**
  - Emergence of the water table at the ground surface

- **Structural Failure**
  - Defences, Embankments, Reservoirs
Flood Mapping

Flood Map in Worcester

Legend
- Flood Map - Flood Defences
- Flood Map - Flood Storage Areas
- Flood Map - Flood Zone 2
- Areas Benefiting from Flood Defences

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Development and Planning

• Local planning authorities consult us on development proposals in flood risk locations

• We provide technical advice on how best to avoid, manage and reduce the adverse impacts of flooding

• In most cases our recommendations are accepted
Building & Maintaining Defence Assets
Flood Forecasting & Warning

FLOOD FORECASTING CENTRE

A working partnership between Environment Agency and Met Office
Flood Warning Codes

- Stay alert
- Stay vigilant
- Early precautions

- Flooding expected
- Take action
- Protect yourselves & your property

- Significant risk to life
- Significant disruption to communities
- Protect yourselves

To sign up for free flood warnings call Floodline on 0845 988 1188
Responding to flooding
Operating Flood Defences
Working with others
There are 175,000 businesses operating on floodplains in England and Wales – is yours one of them?
Find out if you’re at risk

• Call floodline on 0845 988 1188

• Visit [www.environment-agency.gov.uk/flood](http://www.environment-agency.gov.uk/flood)
My business is at risk – what should I do now?
Sign up for free flood warnings

• Call floodline on 0845 988 1188

• Visit

www.environment-agency.gov.uk/floodmidlands
Business Flood Plan

Write it down!
- Important contacts
- Key property, protective materials, service shut-off points
- Basic strategies for protecting property
- Checklists

Train staff how to enact the plan safely
Things to think about...

- Computers
- Vehicles
- Paper files
- Databases / computer files
- Electrical items
- Tables / heavy furniture
- Soft furnishings
- Staff files

"I lost 4,000 customers in the 1999 floods"
Protect your property

- Store copies of important documents in a safe place
- Raise items above ground level
- Move items to safer location if possible – upstairs or off site
- Flood protection products
- Flood resistant items
- Flood insurance
Why prepare for flooding?

- reduce financial losses, damage and business disruption;
- reduce exposure to liability;
- enhance your business' image and credibility with employees, customers, suppliers and the community;
- protect employees, the community and the environment;
- help you obtain insurance cover.
Summary - How you can prepare

Would your business stay afloat?

1. Find out if you’re at risk
2. Flood warning service
3. Prepare a flood plan
4. Train staff
5. Protect property
6. Flood insurance
7. Evacuation
Questions?
Workshop: Business Resilience Healthcheck

Alan Carr
Sustainability West Midlands

07 July 2014
Exercise:
• Fill in a hard copy of the healthcheck.
• We will pause after every couple of chapters and have a small discussion.
• Once you’ve completed the healthcheck, we will collect them and type them up for you.
• You will then receive a complete healthcheck report for your business.
Next Steps

• You will receive a completed healthcheck based on the answers you submitted today.
• **Spread the word!** Discuss with colleagues in your organisation and discuss one key action to start with.
• Revisit those questions that you answered ‘To Check,’ to see if you can fill in any gaps.
• Forward the healthcheck resources to your suppliers and clients; building resilience in your supply chain is just as important!
• Ask your suppliers and contacts if they are interested in attending future workshops like this one. The next one will take place in Worcestershire in late June (details to be confirmed).

**Fill in the evaluation form and return unwanted material**
• Stay in touch – subscribe to our monthly e-newsletter
Thank You

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West Midlands Climate Adaptation Partnership