Flood Resilience
10 Top Tips
Preparing for and Responding to UK Flooding
“We have assets at risk from flooding and want guidance on how to manage this.”

“How can I conduct flood risk due diligence when making asset investment decisions?”

“Flood risk is affecting our insurance placement /premium.”

“We want to include flood resilience in our refit and maintenance programme.”

“We have had a flood loss/claim and want to incorporate resilience to future-proof this risk.”

“We want to better understand the risk that climate change and flooding poses to our organisation.”
In the aftermath of storms Ciara and Dennis and similar events across the globe, flooding is front-of-mind for organisations.

Marsh Risk Consulting have prepared this Flood Resilience: 10 Top Tips guidance note designed to provide practical and strategic risk management advice to organisations who:

- Are concerned about flood risk
- Are looking to conduct due diligence for flood
- May have assets or investments under threat
- Have flooded recently or in the past
- Are interested in flood resilience
- Are interested in parametric insurance solutions

Flood Risk and Resilience Maturity Survey

If you haven’t already done so, you may also want to spend 5 minutes completing our Flood Risk and Resilience Maturity Survey to see how well you are aligned with flood risk and resilience best practices and how you compare with your peers.
New tools to stop the flood protection gap from deepening

Organisations across the UK are finding it increasingly hard to buy affordable and competitive flood insurance. Whether that flooding comes from rivers (fluvial), street flow (pluvial), drainage back-up, groundwater, reservoir breaches, or coastal inundation, an absence of insurance can not only leave you risk-exposed but potentially break loan covenants and other agreements. While more and more organisations are starting to recognise climate change on their risk registers – with its potential to increase costs and disrupt revenues – it has been difficult to know how to practically address these risks beyond trying to insure them. The transitioning insurance market means that organisations must clearly demonstrate they are proactively addressing flood risk in order to obtain stable and good value insurance cover, both today and looking ahead to a warmer world.

Marsh Risk Consulting are at the forefront, supporting organisations throughout the UK with operational resilience measures that manage on-the-ground risk and the impact of flooding; and financial measures in the form of parametric insurance coverage specifically designed to act as an alternative for organisations who are being penalised.

Recover smart and act today against climate change

For some, the worst has already come to pass, with flooding causing costly damage and business interruption. Where recovery works are underway, the challenge becomes balancing the short-term imperative to be back up and running with future-proofing against a repeat event. A new UK flood code of practice means that you can now do both, which is particularly important, as for many with climate change the frequency and severity of flooding is set to increase.

Adopt the Government’s new standard for flood risk management

In February 2020, the UK Government launched its Flood Resilience Code of Practice (COP). UK organisations and property owners now have a trusted source of operational guidance to tackle flooding head-on. The advice goes far beyond simply insuring flood risk, it outlines how organisations can best make physical changes to their properties both before and after flooding occurs to maximise their resilience, so minimising their likelihood of claiming or reducing their “return-to-normal” timeframe from months to days after an event occurs.

Marsh is a founding member of the UK Government’s flood resilience roundtable, which designed and produced the COP. Marsh Risk Consulting are the first risk management team to be awarded the national Flood Resilience Surveying accreditation, so we can start helping make a difference today.

RECOVERABILITY + RESISTANCE = RESILIENCE

Flood resilience is a combination of:

1. Resistance – Measures that hold back water; and
2. Recoverability – Measures that minimise the impact and speed of recovery should water enter the facility.
Can you Spot the Difference Between Resilient and Non-resilient Assets?

Consider resistance and recoverability when taking our “spot the difference” challenge, which highlights some of the differences between a “typical” resilient and non-resilient facility.

Challenge

Can you spot the differences between these resilient and non-resilient properties?

Answers can be found on the back cover.
Flood Resilience: 10 Top Tips

As flooding becomes an ever increasing risk as a result of climate change, embracing resilience activities will enable your organisation to better manage financial, operational, strategic, and reputational risk.

What does flood resilience mean for me and my organisation?

1. Resilient by design
   When designing new buildings in flood-prone areas, make it mandatory to include resilience measures (resistance and recoverability) as part of the design specification. These measures are relatively cheap to install, but can save you millions.

2. Resilient re-fit and repair
   If you have a rolling programme of repair and maintenance, why wouldn’t you include resilience measures as a part of the fit-out and repair schedule and corporate policy? Organisations are increasingly producing two versions – “flood” and “non-flood” – of their re-fit and repair standards.

3. Build back resilient
   When the worst has come to pass, insist that restoration activities are resilient by design. Marsh insurance policy wordings usually include provision for resilient recovery, so take advantage of this by insisting the programme of work and fit-out schedule include it. Even if you have not had a loss, undertake scenario analysis and seek pre-loss agreement from insurers and nominated loss adjusters on the nature and extent of resilient reinstatement which would save time and avoid dispute post-loss.

4. Level the playing field with your insurers
   Are you being penalised for flood risk? Your insurers run a modelling analysis to determine if you have flood risk and where the high-risk sites are, which they then factor into the placement. However, they will not have shared it with you because it breeches their model license. If you take back control and run that same diagnostic Marsh can build your case should you need to recognise and defend against flood now or in the future.

5. Invest resilient
   When making decisions about new investment opportunities, a flood diagnostic can support your due diligence process. The assessment of the current and future flood risk of various locations will allow more informed investment and development decisions.

6. Comply with UK risk management standards
   The transitioning insurance market has impacted the availability of traditional flood cover. Some organisations are having cover denied and others are retaining larger excesses or splitting out flood cover. Parametric insurance is designed to provide an instant payout for complex sites, with an aim to settle claims within 24 hours. Parametric cover works best in tandem with resilience measures as water depth has to reach 15-20cm before cover kicks in.

7. Know and mitigate your high-risk locations
   If you own and/or operate facilities and assets around the UK, do you know if any of these sites have high or extreme levels of flood risk? If so, which are your current “hot-spots” and how will their risk profile change given climate change? Get a diagnostic done, as boards and investors dislike it when sites flood unexpectedly; by understanding the reality you can do something about it today.

8. Develop a corporate flood resiliency strategy
   If you do have assets with medium or high levels of flood risk, by knowing where these are and developing a corporate flood resiliency strategy as part of your wider Enterprise Risk Management (ERM) activities, you can make informed decisions about sanctioning resilience works to mitigate the risk or buying financial protection to offset it. Be sure to consider all aspects of the potential impact including business interruption, human suffering, and reputation.

9. Flood emergency response plans
   Flood plans must be in place for all high and medium risk sites. Developed to incorporate resilience measures, exercise these as part of your crisis management programme to ensure that all stakeholders are familiar with critical actions and any gaps are identified early and dealt with.

10. Instant insurance
    Increasingly, flood risk is changing the insurance landscape. Some organisations are finding flood split out as a separate coverage requirement; others are experiencing high excesses. In cases, with claims history, coverage has sometimes been denied. Parametric insurance is designed to provide instant payout for complex sites. But be aware that it works best in tandem with resilience measures as currently water depth has to reach 15-20cm before the cover kicks in.
Marsh can help you on your flood resilience journey

Our top tips give an overview of the practical and strategic actions that your organisation should be taking today to counter flood and climate change. Whether you’ve recently had a flood claim, know you have flood risk, or are simply curious about flood resilience, we welcome the opportunity to hear your views, and work with you to realign your organisation’s pre- and post-loss risk management activities with the new Code of Practice. We offer a simple, 4-step approach to help you manage this risk.

1. **Diagnostic:** Profile of which sites drive your flood risk today and in future.
2. **Survey:** Site-specific resilience assessment and action plan.
3. **Implement:** Act on the action plan and design/install resilience.
4. **Insurance:** Recognition of risk and resilience improvements.

<table>
<thead>
<tr>
<th>1 DIAGNOSTIC</th>
<th>Portfolio screening and diagnostic for flood today and under future climate change Score and prioritise risk of entire portfolio for: • Riverine (un/defended) • Pluvial (street flow) • Coastal • Climate change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 SURVEY</td>
<td>Individual asset flood survey mapping for risk and resilience, pre-event and claims: • Desktop mapping and modelling for all sources of flood • Field survey of current flood status, risk, and resilience using Marsh survey system • Flood history via local authority, local resilience forum and drainage boards</td>
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<tr>
<td>3 IMPLEMENT</td>
<td>Property flood resilience design and implementation plan for key assets/asset types • Considers resistance and/or recoverability for building and contents in line with Code of Practice Standards • Installation by client’s preferred supplier or in-house team</td>
</tr>
<tr>
<td>4 INSURANCE</td>
<td>Insurance benefits and potential opportunities discussion Parametric instant insurance discussion Flood-reflective insurance design with supplementary underwriting presentation material reflecting resilience to aid in tendering and/or renewal negotiations</td>
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### DELIVERABLES IF YOU ARE DOING THIS WORK BEFORE YOU HAVE A LOSS

- Portfolio flood risk scoring, and mapping report
- Prioritisation of top high- and medium-risk assets
- Asset level risk and resilience report for all hazard types
- Investment due diligence
- Resilience recommendations and action plan
- Asset design specification and schedules of works
- Flood resilient corporate fit-out schedule/policy design
- Flood emergency plan
- Optimised insurance placement reflecting flood risk and resilience work
- Parametric insurance option

### DELIVERABLES IF YOU ARE DOING THIS WORK AFTER YOU HAVE A CLAIM

- Resilient restoration plan as part of the claims process
- Flood resilient corporate fit-out schedule/policy design
- Evidence to insurer that you have “built back resilient”

### The four steps involve:

1. **Diagnostic:** To profile which “hot spot” sites drive your flood risk today and in future.
2. **Survey:** For those high risk sites or for ongoing claims, Marsh provides a detailed flood resilience site survey (mapping from desktop and field survey by accredited surveyors able to deploy the Code of Practice) using our Marsh survey system.
3. **Implement:** A design plan to build, re-fit, or restore the asset in a resilient manner.
4. **Insurance:** Helping you get resilience measures recognised by your insurers and consider additional options such as parametric instant cover.

### Flood resilience in practice - three case studies on organisations we are already helping

<table>
<thead>
<tr>
<th>Client A: Landed estate with assets across UK.</th>
<th>The Challenge</th>
<th>The Solution</th>
<th>The Result</th>
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</thead>
<tbody>
<tr>
<td>Step 1: Portfolio diagnostic for flood and climate change</td>
<td>The client listed climate change and flooding concerns on the corporate risk register and recognised that peers had undertaken climate change assessments.</td>
<td>Using insurer bursary funding, Marsh conducted a flood diagnostic on the client’s portfolio of hundreds of sites to screen for flood risk today and under a climate change scenario.</td>
<td>We were able to prioritise the high flood risk locations for “step 2” flood survey analysis.</td>
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<thead>
<tr>
<th>Client B: Housing association with assets in Northern England</th>
<th>The Challenge</th>
<th>The Solution</th>
<th>The Result</th>
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</thead>
<tbody>
<tr>
<td>Step 1: Portfolio diagnostic for flood and climate change</td>
<td>The client was penalised at insurance renewal due to previous flood claims, with change of terms forcing major changes to the programme. However, the client was unaware of which sites are driving the insurers view of risk.</td>
<td>Marsh conducted a flood diagnostic for the client’s portfolio (consisting of thousands of sites) to screen for flood risk today and under a climate change scenario.</td>
<td>We were able to prioritise the high flood risk locations and develop an informed strategy for representing the client’s flood risk to insurers. This exercise was supported by insurer bursary funding.</td>
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<tr>
<th>Client C: Furniture retailer impacted by November 2019 floods.</th>
<th>The Challenge</th>
<th>The Solution</th>
<th>The Result</th>
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<tbody>
<tr>
<td>Step 3: Resilient fit-out policy.</td>
<td>A client with a Midlands retail store suffered a flood claim, which had previously been flooded and once again refitted according to a standard non-resilient fit-out schedule. Amidst pressure to re-fit in time for the Christmas rush, the claims process and restoration was conducted for a second time according to a standard (not flood resilient) fit-out schedule.</td>
<td>Marsh are currently working with the client to build resilience into their risk management strategy and fit-out programme.</td>
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To find out how Marsh can help your organisation, please contact a colleague below, or visit our website: www.marsh.com/uk/flooding.html

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SPOT THE DIFFERENCE ANSWERS:

1. Boundary wall around property
2. Electrical sockets raised on internal left wall
3. Stock raised off ground throughout site
4. Sump pump installed
5. Flood gates on all facility doors
6. Waterproof flooring
7. Non-return air bricks and vents on right side of exterior wall
8. Parametric flood sensor installed on right outer wall