

# Resilience to the physical impacts of climate change: Our position and commitments

Even if manmade greenhouse gas emissions could be halted today, climate change will continue for decades to come and we can expect sea level to rise well into the next century. This is due to the delayed response of planetary and atmospheric systems that means further warming is already 'locked-in'.

Since the First Industrial Revolution, we have seen the global average temperature increase by 1°C, disrupting climatic patterns and producing more frequent and severe weather events, damaging biodiversity and ecosystems, causing sea level rise and extending the range of many diseases. These changes are happening alongside population growth, urbanisation and infrastructure expansion. As a result, people will experience harm to their health, infrastructure and the environment, as well greater economic loss.

Many countries, states, territories and authorities signed the Paris Agreement of 2015, which set out to prevent global temperature rising more than 2°C above the pre-industrial average, targeting a maximum increase of 1.5°C<sup>1</sup>. Keeping global warming within this range has many social and economic, as well as environmental, benefits. Further warming of just half to one degree will significantly worsen the impacts, such as more severe and frequent storms and flooding, accelerated coastal erosion and more wildfires.

Unprecedented investment in climate resilience – at least US\$1.8trn globally per year between 2020-30<sup>2</sup> – is needed to avoid almost US\$7trn of losses resulting from the social, environmental and economic impacts of climate change.

However, we can minimise costs and accrue benefits if we and our clients embed climate adaptation in our strategies to improve climate resilience.

The Global Commission on Adaptation cites the benefit-to-cost ratio for investment in resilience as ranging from 2:1 to 10:1 and higher in some cases. Our work supports this. We know that when organisations act to prevent direct losses, they can create wider opportunity for themselves, the organisations they transact with, their workforce and customers and neighbouring businesses and communities<sup>3</sup>.

We have the capability and experience to advise our clients and provide resilience solutions in response to rapidly increasing awareness and demand globally. We understand:

- Infrastructure – its design, delivery, operation, and through-life management, as discrete assets and as interconnected systems.
- The environment – environmental processes, environmental quality, the interactions between environmental and infrastructure systems and the value of natural services and solutions.
- Investment – whole-life cost and revenue modelling, business case and risk management.
- Social outcomes – the value of infrastructure services to society and infrastructure as an enabler of inclusive growth<sup>4</sup>.

<sup>1</sup> Beyond 2°C climate scientists expect a 'tipping point' will be reached at which climate change runs unstoppably away. Achieving the Paris Agreement requires all mature industrial economies to reduce their greenhouse gas emissions to net-zero by 2050 and all economies globally to be net-zero by 2070. Read [our position and commitments on net-zero greenhouse gas emissions](#)

<sup>2</sup> Global Commission on Adaptation, '[Adapt now: a global call for leadership on climate resilience](#)'

<sup>3</sup> Mott MacDonald, '[Climate change and business survival](#)'

<sup>4</sup> Read [our position and commitments on social outcomes](#)



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## Our journey so far

Our global climate resilience team was established in 2014 to address the growing climate change needs of our clients and manage our own exposure to the risk of climate change. Resilience services focus on helping clients understand and control their risks, considering robustness, redundancy, recovery and responsiveness in their systems and the way they deliver and manage their assets.

Our approach links our knowledge of climate science and hazards to the design and management of social and economic infrastructure. We assist our clients in assessing their exposure to risk from the physical impacts of climate change. And we develop resilience strategies involving changes to our clients' assets and operating systems, to reduce losses. This helps our clients justify investment in climate resilience, understand their residual risks, develop adaptation pathways which allow investment in planned stages rather than all at once, and disclose their financial risks. Our Group's interdisciplinary skills support this approach, including consideration of how our projects affect the resilience of the environments and communities in which they are located.

We have supported our clients in innovating on their projects and in becoming industry leaders across sectors and in all regions of the world.

Our thinking on how business, infrastructure and society must respond to climate change is set out in two key publications: Climate change and business survival and Mission possible. We have demonstrated our expertise in key international forums by contributing to the latest reports published by the Intergovernmental Panel on Climate Change, as well as by presenting our work at the international climate summits.

Awareness of the increasing risks posed by climate change is also driving changes to our own business management processes – we are working on a programme to manage our own exposure to climate risks.

## Our commitments

### As a consultant

Wherever possible we will help our clients understand how climate change risks could affect them at the earliest stage of our work. Specifically, we will help our clients plan for a 2°C scenario and prepare for other possible scenarios over different timeframes. As a core part of our services, we will promote and instigate interventions that will adapt projects to the changing climate, improve resilience and, where practical, have system-wide benefits. We will bring together the relevant strands of our global capability and capacity to help our clients address the impacts of climate change as they manifest themselves across sectors and geographies. We will also shape industry standards using the highest quality scientific knowledge and evidence to support policy and business decisions.

### As an employer

We will enable and encourage our colleagues to be part of our global response, as climate resilience is an objective that we can all contribute to. We will develop our capacity by providing skills, training and experience to our employees to foster confident, open attitudes that encourage people to come forward with new ideas and by driving technical and financial innovation to meet the challenges arising from climate change.

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## As a global influencer

We will continue to inspire thought leadership, invoke the challenge and promote debate on how society can develop resilience by adapting to climate change. We will contribute engineering and development expertise to initiatives that support adaptation and resilience.

We will also work with our clients and interdisciplinary teams to understand system-wide interdependencies in order to build social and economic resilience to predictable and unpredictable shocks.

## As a business

By the end of 2022, we will identify climate risks and opportunities in projects greater than £500,000 (or equivalent) and by the end of 2024, we will work with our clients to identify and assess climate-related risks in all our projects.

## Our actions

We will, where possible and with our clients' consent, help them to identify, assess, manage and disclose their climate-related risks with the following actions:

1. We will, where possible and with our clients' consent, help them to identify, assess, manage and disclose their climate-related risks with the following actions:
  - Systematically review climate risks in our clients' projects and inform them of the potential harms from the impacts of climate change at the earliest stage of every project.
  - Collaboratively assess the full range of climate risks that they face using the best available scientific evidence and develop holistic resilience and adaptation plans.
2. We will strengthen our global business and minimise risks by:
  - Help our clients anticipate and respond to evolving policy, regulations, markets and standards.
  - Identify solutions that promote resilience through adaptation pathways, as well as positive social outcomes and wider economic benefits.
  - Continue to develop and apply best practice in integrated climate resilience, such as nature-based solutions and adaptive design principles.
  - Work with our clients to manage climate-related risks and continue to develop and apply best practice in climate change risk management.
  - Incorporating the latest scientific knowledge into our work and maximising its use, when needed working with professional bodies and academia to bring insight, develop new thinking and deliver solutions for our clients.
  - Continuing to expand our global climate change service offerings with hubs in all our core territories, to provide technical and risk expertise in support of a local response to climate change, as needed by our clients.
  - Undertaking climate risk assessments for our global offices and offering support to prepare for and respond to the effects of climate-related events. We will do this by integrating climate risk management into our office environmental plans and by providing training to designated staff in each region.



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3. We will continue to fund contributions to climate science and international initiatives that bring about transformational action on climate change resilience and adaptation.
4. We will work with our peers and clients to provide thought leadership and support commitments on climate change resilience and adaptation.
5. We will seek opportunities on our projects for wider social, economic and environmental benefits, and work to realise them.
6. We will, where applicable, support our employees through our employee benefits systems with new initiatives that enable them to implement low-carbon, climate-resilient actions in their own homes and communities<sup>5</sup>.
7. We will review and publish this position paper annually to demonstrate our progress and ensure it continues to reflect our ambitions.

## Will you join us on this journey?

We would be delighted to receive your thoughts and greatly encourage your collaboration on the above commitments. Please contact [madeleine.rawlins@mottmac.com](mailto:madeleine.rawlins@mottmac.com) or [kiki.pattenden@mottmac.com](mailto:kiki.pattenden@mottmac.com).

A handwritten signature in black ink, appearing to read 'M Haigh'.

Mike Haigh  
Executive Chair

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<sup>5</sup> For example, investments paid back through monthly salary deductions in the same way that we currently manage childcare, season tickets and healthcare.