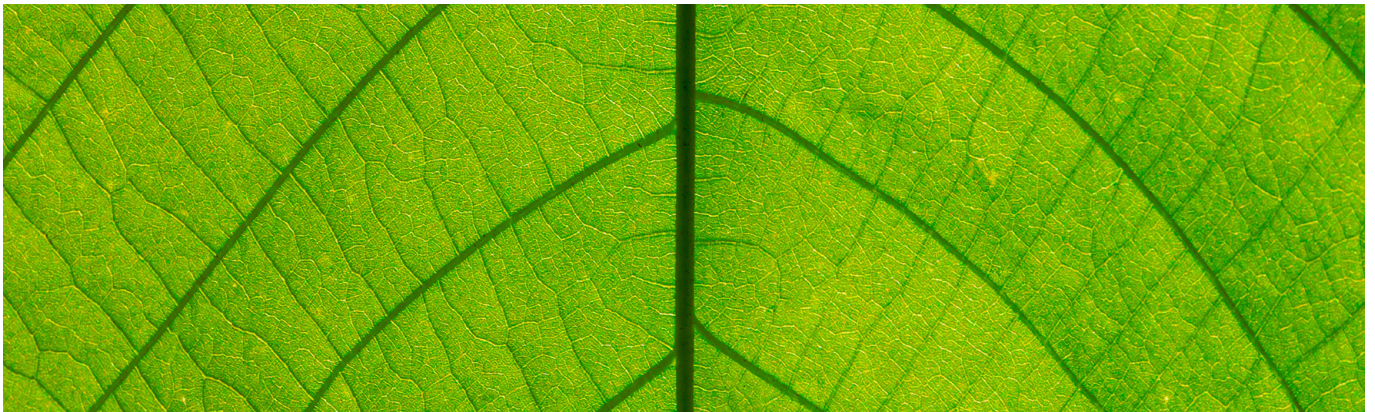


# ESSEX COURT CHAMBERS

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## CLIMATE CHANGE LAW CONFERENCE

### **Session 3**

The Aviation Impact Accelerator  
and scientific and legal issues of  
carbon measurements / causation

### **Author**

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Hogan Lovells

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## Session 3

### The Aviation Impact Accelerator and scientific and legal issues of carbon measurements / causation

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The third session in the Climate Change Law Conference was presented by Professor Tony Purnell, Graham Dunning KC and Dr Marion Palmer.

#### Professor Purnell

Professor Purnell, a Fellow of the Royal Academy of Engineering and an engineering entrepreneur renowned for his involvement in automotive engineering technologies, expressed his view that climate change is a threat to future generations, and encouraged the audience to embrace science and technology as part of the solution.

Professor Purnell outlined challenges for the aviation industry in its steps to improve efficiency, and described various technological developments which might make that possible. Developing technologies in this area include a range of sustainable aviation fuels – including power-to-liquid technologies, bio-yields from waste products, liquid hydrogen, and electric airplanes.

Professor Purnell also commented on the bigger picture for aviation, including changes to infrastructure, government policy, and consumer behaviour. He described the important work that the Aviation Impact Accelerator (the **AIA**) is doing in this area, using simple engineering models to understand power generation, fuel production, distribution, and the 'journey'. He outlined recommendations that the AIA makes at this time, including the pursuit of improvements in air traffic control, investing in new aircraft, and planning aircraft routes to avoid the atmospheric conditions which give rise to contrails (and the associated effects of contrails on emissions).

Professor Purnell offered insights into some of the specific challenges arising in connection with potential ways forward – including the need for redesigns of aircraft to accommodate proposed technical solutions, and the resource allocations required for the production of alternative/sustainable aviation fuels.

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#### Dr Marion Palmer

Dr Marion Palmer, head of global sustainability at Hogan Lovells talked about her own sustainability journey, including work for clients on sustainability and climate change as part of the Hogan Lovells Science Unit. Dr Palmer described the firm's targets for reduction of greenhouse gas emissions, including a 90% reduction in Scope 1 and 2 emissions by 2030 and a net zero target of 2050. Dr Palmer articulated her experiences of how change can be driven effectively in terms of reducing emissions and managing issues that arise in the transition.

Dr Palmer described some of the challenges which arise in the context of sustainability management and carbon quantification within an organisation. She explained the scale and complexity of these exercises, particularly where it is necessary to extrapolate from limited data. The issue of 'unknown unknowns' is a perennial challenge, but proficiency increases with experience.

Dr Palmer discussed the complex organisational questions that arise when undertaking analysis of this kind, particularly when one analyses environmental issues with hindsight, and raised issues around the concept of advised emissions. Legal practitioners are increasingly considering their own position, as are their clients.

We are already seeing requests for 'climate-neutral' services and these are only likely to increase as organisations explore ways to reach their own climate targets.

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### Graham Dunning KC

Graham Dunning KC, a leading advocate and arbitrator and member of Essex Court Chambers, addressed the growing global wave of climate change litigation, spanning many different types of claims, and its consequences (including in relation to insurance matters).

The issue of climate change is a global one, he explained, associated with cumulative emissions. Attribution or causation can therefore be a critical issue; the question of whether causation arises as an issue depends on the nature of the claim.

Mr Dunning KC outlined the various forms which climate change litigation may take, including framework cases (under legislative regimes around the world), greenwashing claims, and human rights claims. In framework cases – such as judicial review of governmental strategies – causation is not typically problematic. In greenwashing claims, causation issues seldom arise in relation to matter of cumulative (and therefore difficult to attribute) emissions; they are more direct.

Causation issues commonly arise in human rights claims against states or governments, though causation-related difficulties may be pre-empted where a claim is based on the infringement of a human right. It is arguable, in public international law cases, that it is sufficient to show that the relevant state (a) was or should have been aware of harm, and (b) could have taken measures to prevent that harm, even if the relevant obligation is shared between states. Some international bodies have received requests for legal opinions on states' obligations and their consequences; we await the rulings.

In the private sphere (as opposed to claims against governmental / state entities), the problem of collective causation arises. The causation issues depend on (a) the nature of the claim and (b) the parties. Mr Dunning KC highlighted the instructive example of a claim brought against a German power company by a Peruvian farmer, which was premised on the principle of 'common but differentiated' responsibilities, where the share of remediation costs would be directly linked to the defendant's share of emissions. In the English common law, the Courts appear to be moving away from the need to prove direct cause and effect in some

instances. The Court found, in the case of *Fairchild v Glenhaven* (a claim by an employee against one of his former employers, concerning exposure to asbestos), that causation could be established for the purposes of liability if a defendant had materially increased the risk that the relevant claimant would contract a disease. In *Barker v Corus* (similarly concerning employees' claims relating to asbestos exposure) the Court held that where a defendant had been found liable, that defendant's share of liability is equivalent to its contribution to the relevant risk. Together these cases offer clues as to how equivalent issues might be dealt with in the environmental context.

Mr Dunning KC concluded by observing that science has an important role to play in proving issues of attribution and causation. Work is going on in many scientific fields; the legal world is working to identify the right sorts of tests. Watch this space!

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