BUILT AND NATURAL ENVIRONMENTS: THE ANNUAL GARNER LECTURE FOR THE UK ENVIRONMENTAL LAW ASSOCIATION

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The Garner Lecture

For 29 years, the annual Garner Lecture has been a cornerstone event in the environmental law calendar. Organised by the UK Environmental Law Association (UKELA), the occasion seeks to remember the life of Professor Jack Garner, a leading environmental lawyer and one of UKELA's founding members. UKELA is a charity and a limited company, with a stated aim to make UK law work for a better environment and to improve understanding and awareness of environmental law across the nation. UKELA publish, advise and teach in order to make the enhancement and conservation of our environment one of the UK's top priorities. UKELA's numerous Working Parties proactively engage with government and regulators to influence policy and legislation.

On 29 November, the 2017 lecture took place in London, hosted by Freshfields Bruckhaus Deringer. I, along with other avid environmentalists, watched the lecture from the comfort of Plymouth University via webcast. Many other delegates in cities around the UK tuned in to the lecture including Bristol, Manchester, Birmingham and Edinburgh. By using the hashtag #Garner2017, a conversation could be started and questions could be submitted regardless of location. The Garner Lecture has welcomed many distinguished speakers over the years, including Lord Carnwath a Supreme Court Judge, Lord Smith former CEO of the Environment Agency and James Thornton the CEO of ClientEarth. This year was no exception as Julie Hirigoyen, CEO of UK Green Building Council (UKGBC), stepped up to the lectern.

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Julie started her career with a law degree from the University of Bristol but said that she quickly realised that law wasn't for her. Her deep 'awe for nature' drew her back to university to study environmental protection and management. Julie chose to apply these academic achievements to the cut-throat property industry, and since then she hasn't looked back. For a number of years, Julie was the UK Head of Sustainability at JLL, an investment management company specialising in real estate, and since 2015 Julie has been the CEO of UKGBC, a charity which puts sustainability at the heart of its mission to transform the built environment. UKGBC is an industry network with over 400 members spanning the construction value chain and is linked with over 73 other green building councils globally, with a collective number of corporate members that exceeds 30,000. It is therefore very fitting that Julie's lecture was entitled, 'the role of law in ensuring that our built environment protects and enhances our natural environment'.

The evening was chaired by Maria Adebowale-Schwarte, Director of Living Space Project. She began the evening by reminding us that although improving environmental law and policy is a difficult and audacious goal, by bringing people together and acting as a collective we can make progress. It was extremely powerful when Maria explained that by improving the environment we are also initiating social and economic good, and creating resilience for future generations. Julie's lecture aimed to discuss how the built environment can be better designed to allow people and the planet to thrive. UKGBC has broken down this vision into five themes, and these were explored in turn throughout the lecture.

Five Key Themes

1 The first topic was climate change, both mitigation and adaptation.

To illustrate the scale of the challenge, it was noted that the UK total carbon footprint is around 831 megatonnes and 22% of that is directly attributable to the built environment. That percentage is made up of embodied energy found in construction materials, energy used on construction sites and energy used to run buildings. One of the most cost-effective ways of reducing our carbon emissions would be by changing the built environment. Research by the Green Construction Board shows that the typical operational energy performance of a non-residential building is around 250% more than what is modelled at the design stage, when the Energy Performance Certificate (EPC) is issued. Heating is a major issue. In fact, heating in buildings represents 10% of the UK's carbon footprint. The question that Julie posed was, to what extent are these issues going to be tackled by legislation and mandatory regulations? And if that is insufficient, what kind of voluntary action should we be taking?

The Climate Change Act 2008 legally requires the UK to reduce its carbon emissions by 80% by 2050 (compared to 1990 levels), but this is an extremely ambitious target and the Committee on Climate Change has shown that the UK is not going to reach that target if we rely solely on Government policy. One of the biggest problems is the complexity of the legal landscape relating to carbon and energy; the amount of policy and legislation is overwhelming and it focuses heavily on operational usage of energy rather than embodied carbon. However, there are some regulatory instruments which have been very effective. The Minimum Energy Efficiency Standards, which will make it unlawful from April 2018 to let out a building with an EPC rating of F or G, are a prime example of shifting market behaviour to improve the energy efficiency of buildings. Voluntary initiatives are increasingly being taken up by companies such as Environmental Rating Assessment Tools which help to design new buildings in an environmentally positive manner. As a real-life example, Julie mentioned the carpet tile manufacturer Interface who have launched the Climate Take Back challenge. This initiative aims for carpet tiles to absorb CO2, when being manufactured and once installed.

2 The second area of focus was resource use and waste.

The UK economy used 576 megatonnes of materials in 2015, and the construction and demolition industry accounts for approximately 50-60% of that and is also the largest industry producer of waste. Around 5% of this waste goes directly to landfill, and the financial cost of this is equivalent to roughly 30% of construction firms' pre-tax profits. The UK does not have much legislation surrounding this problem apart from landfill tax, which is effective in reducing the amount of waste that goes to landfill and may be escalated in the future as needs change. The solution proposed was that of the creation of a circular economy, where products are designed for disassembly, deconstruction and repurposing. We should design out waste altogether and focus on extending the life and value of materials. Modern technology, such as Building Information Modelling, a 3D building modelling tool which brings together the design, engineering and construction communities, could allow people to form creative strategies to solve this issue of depleting resources and increasing waste.

3 The third theme that Julie went on to analyse was biodiversity.

Scientists are referring to the present period as a new epoch called the Anthropocene, marked by a huge decline in species of flora and fauna. The urban environment is very important to biodiversity, and there is lots of natural capital in certain urban areas, but often it is not managed properly. There are many nature conservation and landscape designations which exist to protect biodiversity, and planners are expected to uphold these. Specific mechanisms such as Tree Preservation Orders and newt relocations aid in biodiversity preservation. More recent mechanisms include so-called 'biodiversity off-setting'. When a development cannot

help but cause damage to the natural environment that cannot be mitigated, nature sites will be developed elsewhere. This has been taken up by many businesses, and developments are now reintegrating biophilia into our built environment. For example, between 2014-2015 the number of 'green roofs' in London rose by 20%. Green spaces are extremely beneficial to air quality, carbon sequestration, cooling cities and human wellbeing. Julie noted the Marks & Spencer Cheshire Oaks store as a stand-out example of a green space; the company took many steps, pre and post construction, to promote biodiversity, such as planting hundreds of trees and creating a wildlife habitat through swale planting. In terms of air quality, the construction and waste management industries are commonly attributed with the production of PM10 (particulate matter 10 micrometres or less in diameter). The subject of air quality is high on the political agenda due to its link with high mortality rates and negative health effects.

4 This linked clearly with the speaker's fourth item of focus; health and wellbeing. According to Mckinsey & Company, a management consultancy, 'wellness' is the fastest growing industry worldwide. Julie said that nowadays "healthy is the new wealthy". There is also growing recognition that building design can impact on wellbeing as well as affect staff productivity. As staff costs are one of the highest costs a business incurs, any slight increase in staff productivity through building design, better facilities or integrated green features, is likely to be financially significant to the business. Green design can be seen to improve staff wellbeing, focusing on natural ventilation, natural lighting, lots of open spaces, plants and green walls. This is very exciting as it is an example of voluntary action, driven by the market. Julie explained that the WELL building standard has recently emerged, which explores how design, operations and behaviours within workplaces can be optimised to increase human health and well-being. The Cundall office in London was the first WELL certified building in Europe, they achieved a WELL Gold standard by retrofitting their building, at a cost of around £200 per employee. Since the improvements, Cundall monitored the reduction in staff absenteeism, increase in staff productivity and reduction in staff turnover, and they claim that they made their money back within months.

5 The final topic of contention was the wider issue of socio-economic impacts.
We are currently in a major housing crisis, the UK is failing to provide affordable housing for everyone. House prices are rising but wages are remaining the same and the poor are paying disproportionally more for their rising housing costs. Overcrowding in social housing contrasts starkly with older generation houses that have more space than is being used or is needed. Many existing houses are in disrepair or are too expensive to heat, and these issues are exasperated by regional inequality. There are some legal mechanisms that are attempting to rectify these socio-economic problems. The Clean Growth Strategy sets out a commitment for

all fuel poor homes to be EPC band C by 2030, although it is not suggested how this is going to happen. The Public Services (Social Value) Act 2012 requires people who commission public services to be mindful of securing wider social, economic and environmental benefits for people in the local communities. The property investment and development business, Derwent London, is now conducting socio-economic assessments and appraisals 12 months after they develop a property, to see how the building is being used and how the community are reacting to the development, and these assessments are publicly available.

What next?

Julie concluded her lecture by suggesting that the law will only take us so far in terms of enhancing and protecting the environment, but what we really need is to stimulate, encourage, challenge and inspire leadership and voluntary activity by businesses and developers. The Legal Sustainability Alliance is a movement of law firms and organisations committed to improving the environmental sustainability of their operations. The future is looking exciting as new concepts and products are developed such as Biorock, which is a building material that can act as a carbon sink, passports for building materials so that they can be reused again and again, pollution absorbing paints and carpets and mixed-use buildings (this was trialled in the Netherlands, whereby students get free accommodation living in an elderly care home, and in return they socialise with the elderly residents).

Julie's lecture was extremely interesting and informative. It was a fantastic event to have at Plymouth University and very well organised by Associate Professor, Jason Lowther. After the talk, there was time for networking over drinks and nibbles. This was really positive, as I had the chance to meet people who work in the field of environmental law and talk with them about our mutual interests. Wanting to further develop my interest in the environment, I recently became the UKELA South West Student Ambassador. I am aiming to organise and promote more UKELA events in the Devon area. My mission is to bolster student interest in environmental law and get young people passionate about protecting and preserving the environment. By working with the UKELA Student Advisers and staff members, together we promote national opportunities such as the upcoming UKELA mooting competition, the Andrew Lees essay competition and the opportunity for a student to have their work published in UKELA's online journal E-law.

The future is set to be very stimulating! I am delighted to be working with the organisation and am eager to dive deeper into the inexhaustible depths of environmental law.

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