

iLaw Lunchtime Webinar Series

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# HARNESSING DRONE TECHNOLOGY

24 June 2021  
Tony Roberts



**iLaw**

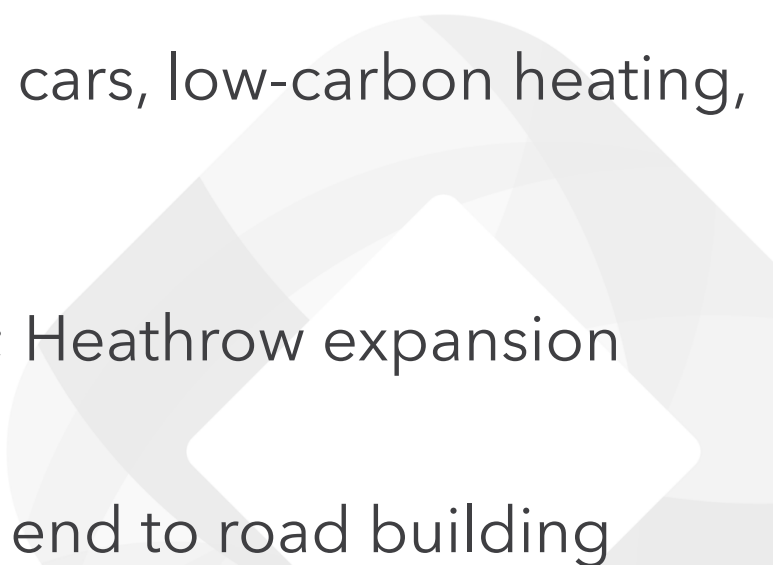
Lawyers for innovators

# HARNESSING DRONE TECHNOLOGY

1. Tony Roberts, iLaw
2. Robert Garbett, Drone Major Group
3. Legal issues and trends
4. Commercial issues and trends



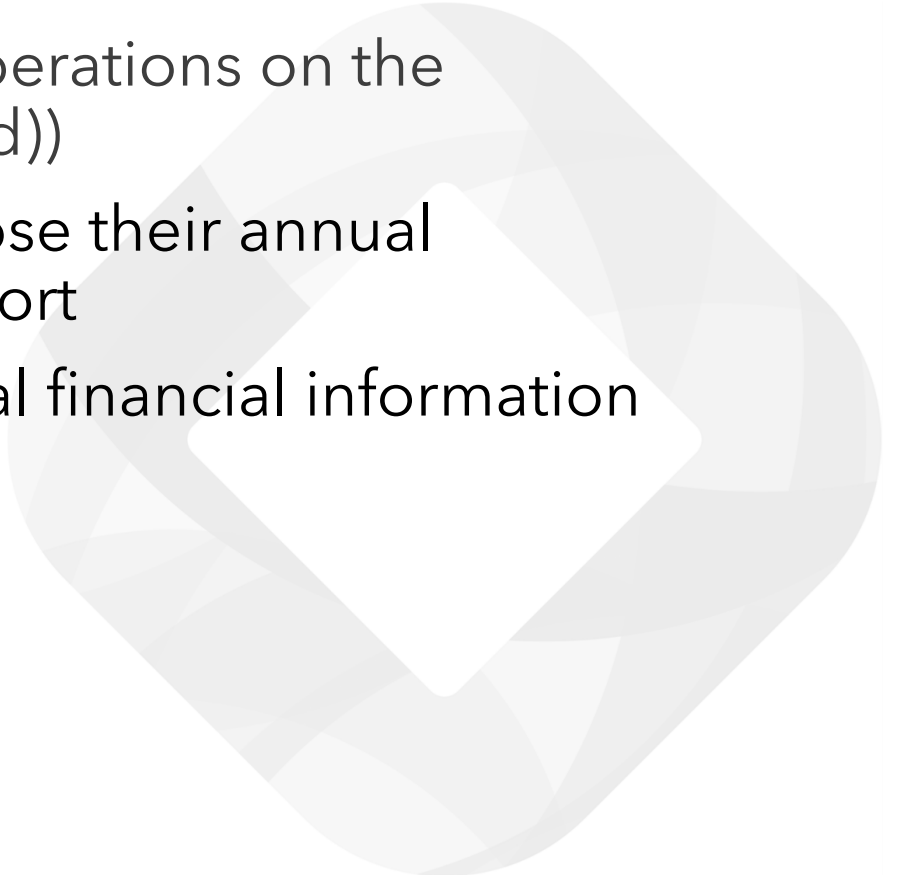
# DRONES AND ENVIRONMENTAL STRATEGY

- UK to cut carbon emissions by 78% (compared to 1990 levels) by 2035
  - Hitting the targets would require more electric cars, low-carbon heating, renewable electricity etc
  - Litigation and activism; eg Cumbria coal mine; Heathrow expansion
  - Welsh government announces (22 June 2021) end to road building
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# DRONES AND ENVIRONMENTAL STRATEGY

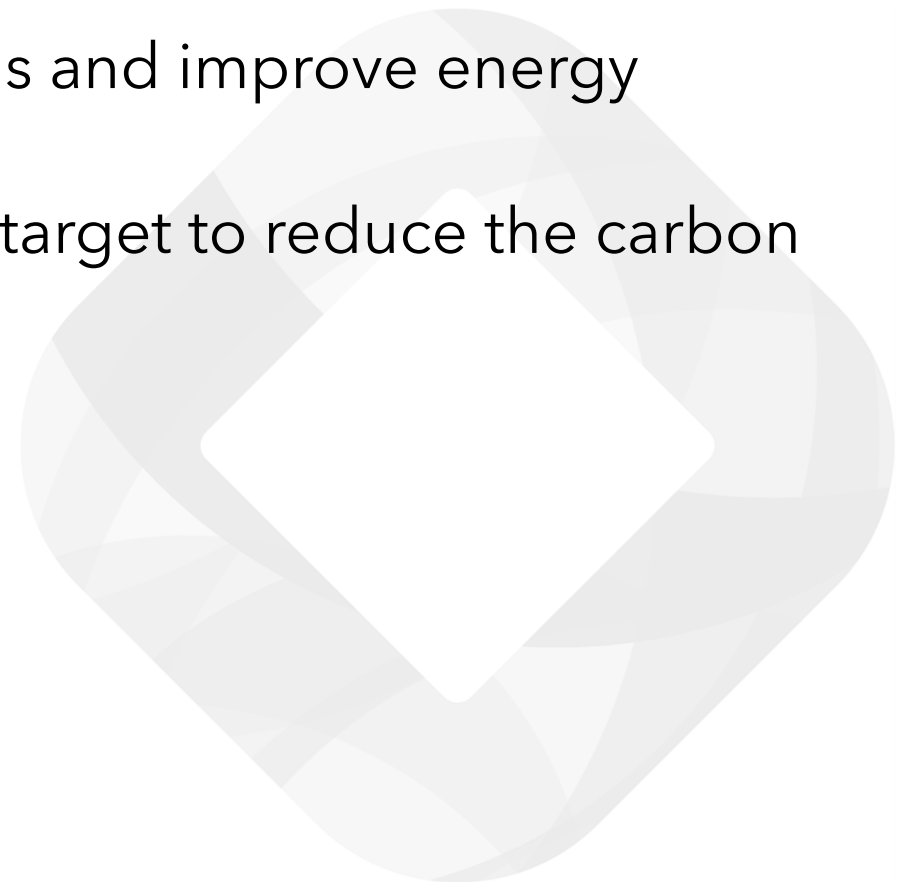
- Use of drones to conduct thermal imaging surveys of commercial property
- Assess the energy efficiency of the building and help improve performance towards carbon neutrality
- Agriculture, fisheries and forestry
- Reduce risks to people working in hazardous areas

# PRESSURE ON COMPANIES AND DIRECTORS

- Companies Act 2006 statutory duties of directors
  - Have regard to the impact of the company's operations on the community and the environment (section 172(d))
  - Since 2013, UK listed companies have to disclose their annual greenhouse gas emissions in the directors' report
  - US SEC requires companies to disclose material financial information about their exposure to climate risks
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# PRESSURE ON COMPANIES AND DIRECTORS

- Shell to become net zero by 2050
- Shell uses drones to detect methane emissions and improve energy efficiency
- Shell has linked the pay of 16,500+ staff to its target to reduce the carbon intensity of its energy products
- Non-binding AGM resolution (May 2021)





# PRESSURE ON COMPANIES AND DIRECTORS

- Pensions & Investment Research Consultants (PIRC) advises investors managing over £1.5 trillion
- PIRC complained that Shell's climate resolution lacked individual accountability for the board
- PIRC noted that Shell did not list the chairman as responsible for the strategy
- PIRC criticised Shell's plan to reduce carbon emissions "in step with society," saying it should be leading instead

# PRESSURE ON COMPANIES AND DIRECTORS

- Pension Regulator has stated that funds must address climate risk specifically in their Investment Strategy Statement
- Law Commission (2014) said: "Trustees may also take account of non-financial factors, where they have good reason to think that the scheme members share their views and that the decision does not risk significant financial detriment"
- Association of British Insurers (ABI) has become a supporting institution of the UN Environment Programme's Principles for Sustainable Insurance Initiative (May 2021)
- Carbon offsetting controversies

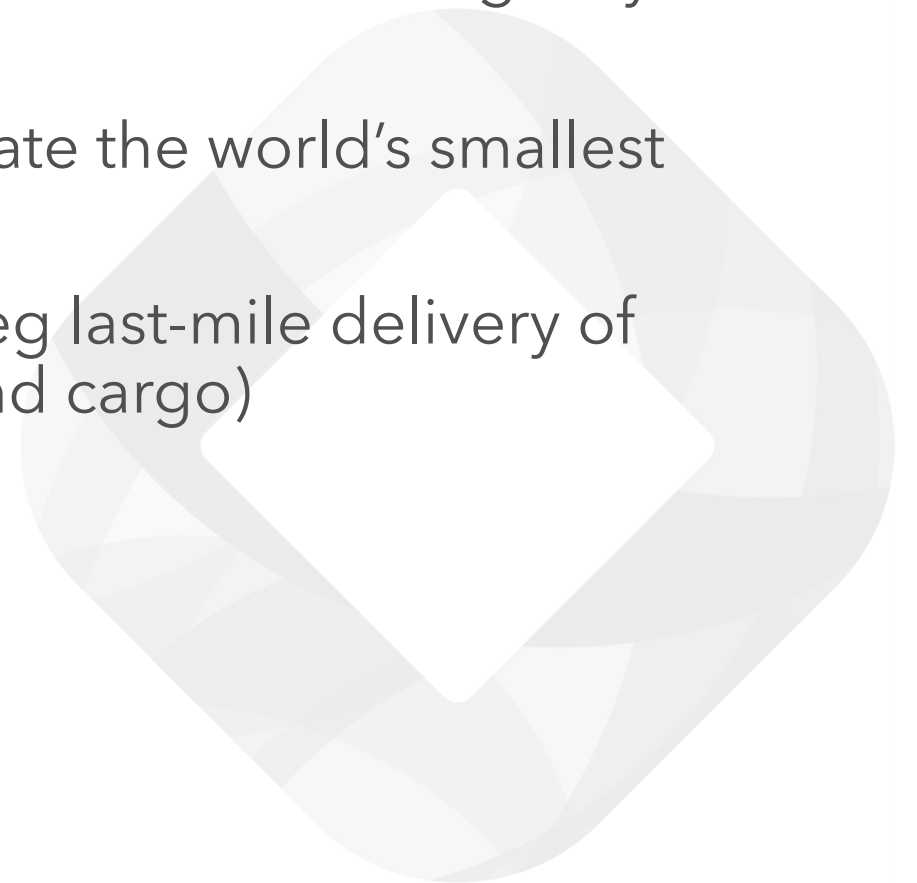


# DRONE TECHNOLOGY - PUBLIC AND PRIVATE

- UK Research & Innovation Future Flight Challenge
- £125m contribution from public sector; £175m from private sector
- Advance electric and autonomous flight technologies to help UK reach net zero target
- PwC socio-economic study (January 2021) indicates unit costs on some projects saw reductions of between 20% and 48%

# DRONE TECHNOLOGY - PUBLIC AND PRIVATE

- Funded project on using drones to support the NHS and emergency services in the wake of COVID-19
- Funded a 'pop-up airport' project that will create the world's smallest airports - eg to support disaster emergencies
- Utilities (eg powerline inspections); medical (eg last-mile delivery of medicines); transport and logistics (eg mail and cargo)



# WIDER PUBLIC SECTOR INITIATIVES

- Advanced Research & Invention Agency (ARIA), backed by £800 million
- Identify and fund transformational science and technology at speed
- Bases on agencies such as US Defense Advanced Research Projects Agency (DARPA)
- DARPA developing air-launched drone that can fire multiple air-to-air missiles (contracts to Lockheed Martin etc)



# WIDER PUBLIC SECTOR INITIATIVES

- Geospatial Commission: Geospatial data to aid in the monitoring of environmental change and its impact
- Two pilots for National Underground Asset Register – a digital map of all underground pipes and cables
- For full benefits of self-driving vehicles, need to collect, store and analyse vast amounts of sensor data within a high-resolution 3D map in real time
- Announced that key parts of Ordnance Survey MasterMap will be made completely open
- Vision that UK will have a coherent national location data framework by 2025

# JOINT VENTURES WITH THE PUBLIC SECTOR

- Allocate rights and responsibilities in contractual documentation
- Management, governance, structure and tax
- Initial funding and ongoing needs
- Business plan and budget
- Public sector “quirks” – eg Fol; Parliament; wider political context

# JOINT VENTURES WITH THE PUBLIC SECTOR

- IP
- Dividend policy
- Exit scenarios
- Dispute resolution





# JOINT VENTURES WITH THE PRIVATE SECTOR

- External funding and security
- Milestones and decision-making/shareholder veto matters
- Change protocols
- Exit scenarios – kitchen-sink protection

# JOINT VENTURES WITH THE PRIVATE SECTOR

- Non-competition
- Conflicts of interest with wider businesses
- IP and improvements
- Risks to London as top arbitration centre – eg virtual hearings; quality; Singapore and Hong Kong etc

# MITIGATING RISKS FROM DRONES

- Sensitive sites; public events; crowded places; critical infrastructure
- Home Office Counter Drones Unit coordinates legislative and operational response
- Businesses should develop a counter-unmanned aerial system (C-UAS) strategy as part of wider security plan: National Counter Terrorism Security Office
- Geospatial Commission to set clear guidelines on data access, privacy, ethics and security, and promote better use of location data

# OTHER ISSUES

- Air Traffic Management and Unmanned Aircraft Act 2021
- Regulatory framework and future changes
- Enforcement and penalties; geo-fencing etc to protect airports
- Civil Aviation Authority: first trial project authorising drones to operate Beyond Visual Line Of Sight (BVLOS)
- Insurance

# THANK YOU

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**Tony Roberts**

@ [tony.roberts@ilaw.co.uk](mailto:tony.roberts@ilaw.co.uk)

☎ 0738 439 3040

in [Tony Roberts](#)



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