Risk Management Briefing

Professional Use of Drones

Updated February 2026

Introduction

The construction industry is increasingly relying on drone technology as it becomes more affordable and accessible to support operations, surveying, progress reporting, and general photography. This risk management briefing focuses on potential liability risks and insurance implications related to the professional use of drone technology.

Background

UK drone legislation has rapidly evolved from early regulation that treated small unmanned aircraft as a niche activity, subject only to basic safety and endangerment restrictions. A series of high-profile incidents from 2018 onwards, most notably the widespread disruption at Gatwick Airport following reported drone sightings near the runway, significantly accelerated regulatory reform and enforcement focus.

Subsequent changes aligned the UK with the European risk-based aviation model, introducing mandatory operator registration, pilot competency requirements and a structured categorisation of operations to better reflect differing levels of operational risk. Following the UK's exit from the EU, these regulations were retained in UK law, with the Civil Aviation Authority ("CAA") assuming full responsibility for developing domestic policy, detailed guidance and enforcement frameworks.

More recent developments reflect a clear shift towards enhanced competency, traceability and accountability, including expanded training requirements and the phased introduction of Remote ID, all underpinned by the core legal principle of protecting people, property and other airspace users from endangerment.

Drone Use as a Professional Activity

The use of drones in the construction industry has many different uses, which relate to operations on active construction sites or in the public domain, both of which have a level of liability when operating near:

- Uninvolved members of the public
- Occupied buildings
- Critical national infrastructure
- Over and around active machinery in site
- Sensitive environments and wildlife
- In low-level air traffic areas
- Public celebrations and events involving fireworks, lanterns or balloons

The common activities include:

- **Architectural photography and videography** of completed buildings, façades and developments, often from the public domain (streets, highways, public squares);

- **Active construction sites**, including:
    - survey and mapping
    - progress monitoring
    - site security and surveillance

- **Surveying and inspection of existing assets**, including:
    - wind turbines and renewable energy assets,
    - railway infrastructure (tracks, bridges, stations, overhead lines),
    - power stations, substations and transmission assets,
    - industrial plants, ports and utilities infrastructure,
    - tunnel surveying,
    - land, buildings of all sizes, to large developments and city landscapes

Core Principle

The Air Navigation Order 2016 (as amended by the Air Navigation (Amendment) Order 2018 and the Air Navigation (Amendment) Order 2022) outlines the core statutory principles that "***a person must not recklessly or negligently cause or permit an aircraft to endanger any person or property***" *and* "***a person must not recklessly or negligently act in a manner likely to endanger an aircraft, or any person in an aircraft***".

Regulatory Overview

The CAA introduced Civil Aviation Publication ("CAP")722 for unmanned aircraft system ("UAS") operations in UK airspace and is considered the backbone of overall guidance for the professional use of drones. The details of the guidance can be found in a series of CAP guidance notes on processes and frameworks to assist drone operators in achieving the core principles set out in the Air Navigation Order 2016 (as amended).

From **1 January 2026**, the following regulatory changes come into force, which increase the traceability of pilots and their equipment. The use of bespoke or old drone technology may contravene the changes if the equipment does not meet the minimum requirements for product standards.

- Flyer ID theory-test requirement expands to cover drones over 100g (previously 250g).

- Direct Remote ID (RID) becomes legally required for certain UK class-marked drones (phased by class).

- UK class marking/product standards apply to Open Category drones (UK0–UK6), including functional requirements (e.g., geo-awareness, Remote ID, lights) and oversight by a Market Surveillance Authority.

The Unmanned Aircraft (Offences and Consequential Amendments) Regulations 2025 establish criminal offences where operators/remote pilots breach specified requirements in the retained UAS operating rules framework, in force from **1 January 2026**.

CAP 722A introduces a new risk assessment method for the Specified Category as an acceptable means of compliance. Professionals will need to ensure that risk assessments meet the guidance in CAP 722A.

From **1 January 2028**, the remote ID extends to class UK0 (drones that weigh less than 100 grams with a camera) and some model aircraft, privately built unmanned aircraft and legacy drones that weigh less than 100 grams. This will affect professionals who are operating bespoke drones.

Liability – Case Law

The UK drone case law is developing and courts are yet to establish clear principles that are directly relevant to the construction industry. The following cases identify the potential liability risks associated with endangerment, recklessness, police enforcement, and misuse.

Miaun (2018)[1] – Police Direction and Recklessness
The defendant operated a drone in restricted airspace and failed to comply with police instructions. The courts relied on evidence of telemetry data and imagery to determine whether the drone operated in restricted airspace.

MBR Acres Ltd v Curtin (2023)[2] – Civil Trespass and Nuisance
The High Court accepted that repeated drone overflights at low altitude interfered with landowners' rights and justified injunctive relief.

HSR Ltd v Persons Unknown (2022)[3] – Civil Trespass and Nuisance
The court held that drone use over construction sites could constitute trespass and supported injunctions.

[1] https://www.independent.co.uk/news/uk/crime/drone-flight-illegal-guilty-cambridgeshire-peterborough-court-crime-sergej-miaun-a8636986.html
[2] [2025] EWHC 331 (KB)
[3] [2022] EWHC 2368 (KB)

Maxey & Another v R (2025)[4] – Public Nuisance
Intention to disrupt Heathrow Airport in September 2019, whilst no flights were undertaken, the courts considered a conviction for conspiring to cause a public nuisance. An unsuccessful appeal against the decision was made in 2025.

Liability

Who is exposed to liability?

In commercial drone operations, legal responsibility sits primarily with the UAS Operator and the organisation undertaking the activity. The UAS Operator owns the operation and its associated risks, while the Remote Pilot exercises direct control of the aircraft during flight. In some cases, these roles may be fulfilled by the same individual.

Business	UAS Operator	Remote Pilot
Sole trader drone business	Same person	Same person
Company (employed pilots)	Company	Employee
Contractor hired to fly	Contractor company	Contractor pilot

The UAS Operator is accountable for planning, risk assessment, permissions, aircraft suitability, insurance, and overall governance of the operation, and with the Remote Pilot, who is personally responsible for the safe, real-time control of the aircraft and for aborting the flight if conditions become unsafe.

Regulatory scrutiny increases with operational risk, particularly where flights take place near people, buildings, or critical infrastructure. Depending on the circumstances and causation, liability may attach to the operator, the remote pilot, or both. Employers may remain vicariously liable for the acts or omissions of employed Remote Pilots acting in the course of their duties.

Operational and Flight Risks

Commercial UAS operations involve multiple, overlapping layers of legal and regulatory exposure. Within the UK aviation framework, responsibility for compliance with aviation safety requirements is clearly placed on both the UAS Operator and the Remote Pilot. Breaches of the applicable rules and authorisations can lead to enforcement action and, in serious cases, criminal liability.

Alongside aviation regulation, operators remain subject to wider health and safety obligations to protect employees and the public, as well as potential civil liability for negligence, nuisance, trespass, property damage, or personal injury.

Impact to wildlife in or around the vicinity of where the drone is operating may also give rise to civil claims when drone activity interferes with the lawful use or enjoyment of land, contributes to environmental damage, or results in regulatory enforcement actions. In certain circumstances, liability may attach even in the absence of physical contact with

[4] [2025] EWCA Crim 472

animals, particularly where disturbance is foreseeable and preventable through appropriate planning and operational controls.

Where operations capture or process identifiable personal data, separate data protection and privacy duties arise under UK data protection law. These obligations apply independently of aviation compliance.

Commercial drone activities also carry contractual and professional risks, including the accuracy and reliability of survey outputs, reliance on deliverables, intellectual property issues, and cybersecurity. Mandatory third-party aviation insurance provides an important layer of protection, often reinforced by contractual indemnities, but recognised guidance makes clear that insurance may not remove all residual risk.

Reliance on data

Unmanned aircraft are capable of capturing far more than photographs and video. They can be used to collect a wide range of specialist data, including thermal and infrared imagery, multispectral and hyperspectral data, LiDAR, environmental and atmospheric measurements, as well as acoustic and vibration data.

The accuracy of this data is often relied upon to identify and assess risks, inform engineering and design decisions, and produce mapping and analytical outputs. A number of factors can affect data accuracy, including the quality and suitability of the equipment used, correct calibration of sensors, flight planning considerations, environmental conditions, and the post-flight processing and interpretation of the data.

The responsibilities and risks faced by UAS Operators and Remote Pilots do not end with safe operation of the aircraft and adherence to flight procedures. They extend to the purpose of the operation and the integrity of the data being collected. As regulatory guidance from the CAA provides limited direction on data outputs and data quality, UAS Operators and Remote Pilots must consider other relevant standards, best practice guidance, and industry-specific requirements applicable to the data being captured.

Where unmanned aircraft are operated with specialist sensors, such as thermal cameras, additional training may be required. Remote Pilots should have a sufficient understanding of how thermal imaging works, including the limitations of the technology and the environmental and operational factors that can affect data accuracy and interpretation. The same principles apply to any specialist equipment used on unmanned aircraft, where a lack of understanding could lead to inaccurate outputs, flawed conclusions, or increased operational risk. Where drone-derived data informs engineering, design, or safety decisions, inaccuracies may give rise to professional negligence claims.

Conclusion

The professional use of drones within the construction sector engages a broad range of civil liability risks in tort, particularly in relation to negligence, nuisance, trespass and, in certain circumstances, misuse of private information or environmental harm. While the aviation regulatory framework is primarily concerned with safety, endangerment, and airspace management, compliance with aviation law does not, of itself, prevent civil liability from

arising where harm is caused to people or property, or where environmental obligations are breached.

Where a drone operation results in personal injury or property damage, liability will generally turn on whether the UAS Operator and/or Remote Pilot owed a duty of care, breached that duty, and thereby caused reasonably foreseeable loss or damage. Construction environments frequently involve elevated risk factors, including proximity to members of the public, occupied buildings, traffic corridors and critical infrastructure. In such contexts, courts are likely to expect a high standard of care, supported by documented planning, competent personnel, appropriate equipment selection and robust risk assessment.

In addition to risks of physical harm, drone operations may expose operators and commissioning organisations to liability arising from disturbance to wildlife or protected habitats. Low-level flight, repeated overflight, noise, lighting, or the use of drones equipped with specialist sensors may cause stress, displacement, injury or disruption to breeding, nesting or feeding behaviour. Where such a disturbance affects protected species or designated sites, liability may arise under wildlife and environmental legislation, independently of any aviation compliance.

Loss of control, flyaways, distraction, falling payloads, or interference with other site activities may all give rise to claims even where no collision occurs. Damage to third-party property, interruption of business activities, or consequential losses may also be recoverable where causation and foreseeability are established. In addition, repeated or intrusive operations may give rise to claims in nuisance or trespass where flight activity interferes with the reasonable use and enjoyment of land.

The allocation of liability between the UAS Operator and the Remote Pilot will depend on the specific facts, contractual arrangements, and the degree of control exercised over the operation. Employers and commissioning organisations may be exposed to vicarious liability for the acts or omissions of pilots in the course of their duties, as well as to direct liability for failures in training, supervision, governance, or equipment selection.

Mandatory third-party aviation insurance provides an essential layer of protection against personal injury and property damage claims, but may not eliminate all risk, such as wildlife offences or associated enforcement action. Coverage may be subject to policy limits, exclusions, conditions precedent, and compliance with regulatory and operational requirements. Civil claims may also extend beyond insured losses, particularly where contractual assumptions of liability, uninsured heads of loss, or reputational damage are involved.

Accordingly, construction professionals using drones should view civil liability risk as an integral part of operational planning rather than a residual concern addressed solely through insurance. Effective risk management requires a holistic approach that integrates regulatory compliance, health and safety obligations, competence assurance, data governance, contractual clarity and insurance alignment. As the use of drones becomes increasingly embedded in construction practice, the ability to demonstrate foresight, proportional risk control and professional judgment will be central to managing exposure to tortious liability for personal injury and property damage.

This Risk Management Briefing is for information only, and insurance or legal advice should be taken to cover your particular circumstances.

This briefing was updated by the Practice and Technical Department at CIAT and their representative Harry Pangli on the CIC Liability Panel.

It is available at www.cic.org.uk

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