

Low-flying Drones and Ownership of Airspace in Ireland

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Introduction

The advent of air travel in the early twentieth century initially gave rise to challenging legal questions. As Banner explained:

‘When aerial trespass was viewed as a genuine problem, people proposed all sorts of solutions, in all seriousness, that sound laughable today. How about requiring airplanes to fly above streets? Or use the government’s power of eminent domain to condemn air routes over private land? ... Or solve the problem of inconsistent state law with kites, to mark state lines where pilots could see them?’¹

While the potential problems associated with aerial trespass in the higher altitude airspace were side-stepped with the designation of such airspace as public ‘navigable’ airspace, questions relating to the ownership of lower altitude airspace over private property were not as clearly addressed. In particular, questions remained as to the extent to which landowners’ property rights extended into the immediate airspace over their property. Fortunately, as manned aircraft do not typically fly at lower altitudes, the ambiguity which existed in this regard did not, at a practical level, prove particularly problematic. However, it now appears the debate is about to reignite once more.

Reflecting a trend across many countries in the western world, the use of unmanned aircraft in the form of drones – otherwise known as unmanned aerial vehicles or unmanned aerial systems – in Irish skies has grown dramatically in the last two to three years. Currently, it is estimated there are approximately 4,000 drones in use in Ireland with the overwhelming majority used for recreational purposes.² Projections for future sales suggest an even more intense increase in the use of drones in the coming years. Thus, the legal questions in relation to the ownership of the sky in which these drones are operating must, as a priority, be addressed. Does a landowner, for example, have a right to exclude the use of drones over their property or sue for trespass where such an incursion takes place? This article seeks to answer such questions. It places the spotlight firmly on the uncertainty which surrounds the ownership of the lower altitude airspace and discusses how greater clarity might be provided.

Ownership of Airspace in Ireland

For centuries, the old Latin maxim – ‘*cujus est solum, ejus est usque ad coelum et usque ad inferos*’ – has been referred to when discussing the extent of property rights. The owner of the land, according to the maxim, owned everything reaching up to the heavens and down to hell.³ However, with the advent of modern aviation, the maxim came to be viewed as a mere relic of a bygone age. As Wilberforce LJ observed in in the *Commissioner for Railways v Valuer-General*:

'In none of the cases [in which the maxim was discussed] is there an authoritative pronouncement that "land" means the whole of the space from the centre of the earth to the heavens: so sweeping, unscientific and unpractical a doctrine is unlikely to appeal to the common law mind.'⁴

Soon afterwards, the maxim was effectively dismissed by Griffiths J as a mere 'colourful phrase' in the seminal Queen's Bench decision of *Bernstein of Leigh (Baron) v Skyviews & General Ltd*.⁵ Here, contrary to the maxim, it was clarified that a landowner did not own all the airspace above their property. The case arose when the defendant flew over the plaintiff's land to take an aerial photo of his country house which he then offered to sell to the plaintiff. The plaintiff subsequently sued for trespass. He failed. Griffiths J held:

'The problem is to balance the rights of an owner to enjoy the use of his land against the rights of the general public to take advantage of all that science now offers in the use of air space. *This balance is best struck in our present society by restricting the rights of an owner in the air space above his land to such height as is necessary for the ordinary use and enjoyment of his land and the structures on it.*'⁶

Thus it was established that although an owner did not enjoy ownership rights over all the airspace above their property, their rights did extend to such height as was necessary *for the ordinary use and enjoyment of the land* and the structures on it.

In Ireland, section 55 of the Air Navigation and Transport Act 1936 reflects this common law position. Pursuant to section 55, a landowner may not sue for trespass or nuisance where aircraft fly over property at a height which is *reasonable* having regard to wind, weather and all the circumstances. 'Aircraft' is defined as including: 'all balloons, whether fixed or free, kites, gliders, airships and flying machines'.⁷

Two well-known cases which touched on the issue acknowledged the interest of landowners in the lower altitude airspace over their property. In *Woollerton and Wilson Ltd v Richard Costain Ltd*, the plaintiffs successfully secured an injunction against the defendant builders whose crane's jib traversed the airspace over the plaintiffs' property.⁸ Likewise, in the decision of *Keating v Jervis Shopping Centre*, the Irish High Court deemed a similar intrusion into airspace to constitute trespass and proceeded to award damages.⁹

Unfortunately, however, precious little clarification in relation to the extent of a landowner's rights in the airspace over private property has been provided on either side of the Irish Sea in the intervening years. Despite this, the recognition of landowner's interests in *some* share of the airspace over private property was implicitly acknowledged in the Land and Conveyancing Law Reform Act 2009. 'Land' is defined in the 2009 Act as including:

'the airspace above the surface of land or above any building or structure on land which is capable of being or was previously occupied by a building or structure and any part of such airspace, whether the division is made horizontally, vertically or in any other way'.

Thus, as Professor Wylie notes, it is clear that such airspace over private property 'can be owned or conveyed separately from the surface'.¹⁰

Yet the question remains: Precisely what height would be considered ‘capable of being ... occupied by a building or structure’ or be deemed ‘necessary for the ordinary use and enjoyment of the land and the structures on it’? Although it is not possible at present to answer this question definitively, in light of the growth in the use of drones in Ireland, it appears highly probable that such a question is likely to be raised before the Irish courts in the not-too-distant future.

In this context, it is worthwhile to consider how other jurisdictions are dealing with the need to balance the competing interests of private property owners with those of drone users. To this end, let us briefly consider some responses in the United States of America.

Airspace and drones in the USA

In the USA, although ownership of the higher altitude airspace was clarified with the introduction of federal legislation which authorized interstate flights within ‘navigable airspace’, later defined as the majority of airspace over 500 feet above ground level,¹¹ the extent to which private landowners could seek to enforce ownership rights of airspace at lower altitudes remained quite vague.

In the *United States v Causby*, Douglas J in the US Supreme Court observed that the traditional *ad coelum* doctrine, taken literally, had ‘no place in the modern world’.¹² However, the court added:

‘[I]t is obvious that, if the landowner is to have full enjoyment of the land, he must have exclusive control of the *immediate reaches* of the enveloping atmosphere.... The landowner owns at least as much of the space above the ground as [he] can *occupy or use* in connection with the land... The fact that he does not occupy it in a physical sense—by the erection of building and the like—is not material.’¹³

The court also observed:

‘The superadjacent airspace at this low altitude is so close to the land that continuous invasions of it affect the use of the surface of the land itself. We think that the landowner, as an incident to his ownership, has a claim to it, and that invasions of it are in the same category as invasions of the surface.’¹⁴

Although the decision was helpful in confirming the *existence* of landowner rights in the lower altitude airspace over private property, the court consciously chose to avoid providing any greater clarification on the exact altitude to which these rights might extend.¹⁵ In the intervening years, notwithstanding the ‘fuzzy’ standards introduced,¹⁶ the courts began to use *Causby* ‘as the starting point for analyzing all property-based challenges to intrusions upon airspace’,¹⁷ with aerial trespass claims in the aftermath of the decision scarce.¹⁸ Akin to Ireland, however, the emergence of drone technology has once again brought such issues back into focus with the lack of clarity in relation to ownership of the lower altitude airspace attracting considerable attention in local and national media.¹⁹

In light of this confusion, many states have enacted legislation directly aimed at regulating drone use.²⁰ While some states have opted to restrict the use of drones in certain circumstances²¹ or in relation to certain industries,²² the most popular approach to date appears to be the adoption of legislation addressing the privacy issues arising as a result of drone use.²³ Although the use of drones may, in some cases, be reduced in light of these interventions and thus limit the potential for conflict

between landowners and drone users, no state known to the author has, as yet, enacted legislation directly tackling the serious property law issues which arise.

Nevertheless, proposals have been made in this regard. In California, Senate Bill 142 sought to enact 'trespass liability for anyone flying a drone less than 350 feet above real property without the express permission of the property owner, whether or not anyone's privacy was violated by the flight'.²⁴ Despite the Bill easily passing the state legislature,²⁵ it was ultimately vetoed by Governor Jerry Brown. Justifying his decision, Governor Brown observed:

'Drone technology certainly raises novel issues that merit careful examination. This bill, however, while well-intentioned, could expose the occasional hobbyist and the FAA-approved commercial user alike to burdensome litigation and new causes of action.'²⁶

He concluded that the issue need to be looked at 'more carefully'.²⁷

Potential Options for Ireland?

Notwithstanding the ultimate demise of Bill 142, the adoption of legislation clearly establishing the aerial limits of private property ownership does present an interesting solution to the current difficulties which exists in relation to the ownership of lower altitude airspace. Advancing similar proposals expressly entitling landowners to exclude drones from the airspace above the surface of their land to a height of 500 feet in most locations, Rule notes such reform 'would at last provide a definite ceiling to the three-dimensional column of space initially allocated to surface owners under the common law's ad coelum doctrine'.²⁸ He adds:

'By establishing clearer entitlements in low-altitude airspace and creating a solid legal backdrop from which to layer supplemental rules, these laws would be a valuable step toward the more orderly and efficient integration of drone technologies in the United States.'²⁹

It is arguable that such reform ought also to be afforded consideration in Ireland. Although Rule's suggestion of a 500 foot limit would not appear viable – existing regulations in Ireland currently impose a 400 foot ceiling on most drone usage (albeit that such regulations do not relate to the ownership of airspace and are merely regulatory in nature)³⁰ – the merits of such a proposal, establishing a clear upper limit on the extent of a private property owner's interest in the airspace, appear clear.³¹ Such reform would provide much needed clarity for private property owners and drone users alike. While it would confirm for both sides that they do both enjoy some entitlement to share the lower altitude airspace, it would simultaneously send out a strong message to drone users to have regard to the rights of private property owners when operating their unmanned aircraft and require them to fly at an appropriate altitude.³²

Undoubtedly, there would be practical difficulties in enforcing such limits. Proving that a drone was, in fact, trespassing and flying beneath the threshold established could be challenging. However, having regard to the technological capabilities of drones and the approaches adopted in other jurisdictions, this potential problem may be offset in some situations. In the case of commercial drones, for example, drone users could be required to maintain logs tracking the altitude and coordinates of their flights at all times.³³ In the case of recreational users, although, admittedly, it may be harder to establish the altitude at which they were flying in borderline cases, the strength of the

proposal may be in its symbolic value – highlighting for recreational users the importance of being cognisant of the property rights of landowners and the possibility that they may be liable for trespass.³⁴

Conclusion

Given the ever-increasing popularity of drones in Ireland, coupled with the competing interests of the various parties involved and the lack of legal clarity on key issues such as the ownership of lower altitude airspace, conflict and litigation appear inevitable. While on one hand, the ‘flexibility of operation sought by the user community’ has been noted,³⁵ on the other, property owners appear equally likely to seek to assert their rights in the airspace over their private property. In this context, it is submitted thought ought to be afforded to the adoption of a ‘bright line’ approach clarifying the three-dimensional extent of property rights over private property. Such reform would provide a more transparent framework within which drones may be operated and developed, providing clarity for drone-users and landowners alike and send a powerful symbolic message to the increasing numbers of drone users of the rights of landowners in lower altitude airspace and the potential liability to which they may be exposing themselves in the absence of consent. Indeed, in light of the current indefinite nature of landowner rights in the airspace over their property, the potential for the ever increasing cohort of drone users to disregard or remain ignorant of these rights appears acute.

Interestingly, Paschal Donohoe, TD, Minister for Transport, Tourism and Sport, recognising the drone sector ‘is likely to be gigantic in the coming years’, recently highlighted the need for legal clarity surrounding the use of drones.³⁶ In particular, he asked: “How do we ensure they are operating in airspace that is clearly defined for their use in society?”³⁷ The conversation has now started. The tentative proposal for reform advanced here could go some way to answering these questions.

Note, this research was published as ‘Low-flying Drones and Ownership of Airspace in Ireland’ (2016) 21(1) Conveyancing & Property Law Journal 7-11

¹ Banner, *Who Owns the Sky? The struggle to control airspace from the Wright Brothers on* (Harvard University Press, 2008) 2-3.

² See Irish Aviation Authority <<https://www.iaa.ie/m/news.jsp?i=547&gc=99&p=106&n=1244>> [Accessed 29 October 2015]. According to the Authority, to date, less than 100 drone users have secured permission from them for the commercial use of drones in Ireland.

³ Gray, ‘Property in Thin Air’ (1991) 50 *Cam LJ* 252, noted at 253: ‘This brocard appeared first in the writings of the 13th century Accursius of Bologna, and was rapidly incorporated into the rhetoric of the common law estate in fee simple.’

⁴ [1974] A.C. 328 at 351

⁵ [1978] Q.B. 479 at 485

⁶ [1978] Q.B. 479 at 488 (emphasis added).

⁷ Section 2 of the 1936 Act.

⁸ [1970] 1 W.L.R. 411. However, it is important to note that the injunction was postponed for a year to allow the construction work to be completed.

⁹ [1997] I.R. 512. Although Ni Fhloinn, ‘The Tort of Trespass: Land, Air, Buildings and Recent Case Law on Trespass and Receivers (2015) 20(2) CPLJ 3 notes, ‘the extent to which a court will intervene to restrain access

to the space above land at the suit of the owner will vary depending on the circumstances, and will take account of the *nature and duration* of an incursion into airspace' (emphasis added), it is important to remember trespass is actionable per se and is therefore not dependent on any harm having been suffered. See Quill, *Tort in Ireland*, 4th ed (Dublin: Gill & Macmillan) Chapter 4.

¹⁰ Wylie, *Irish Land Law*, 5th ed (Bloomsbury Professional, 2013) 201. However, he notes 'the precise area so conveyed must be clearly defined by the wording of the conveyance if it is to avoid the risk of being held void for uncertainty'.

¹¹ See the Air Commerce Act 1926 and Civil Aeronautics Act 1938. For more see Troy A Rule, 'Airspace in an Age of Drones' (2015) Boston Uni L Rev 155, 166-167.

¹² *United States v Causby* (1946) 328 U.S. 256, at 260-261.

¹³ *United States v Causby* (1946) 328 U.S. 256 at 264 (emphasis added). Damages were awarded in the case given the low level at which the planes were flying (landing, taking off etc).

¹⁴ *United States v Causby* (1946) 328 U.S. 256 at 260.

¹⁵ *United States v Causby* (1946) 328 U.S. 256 at 266. The court specifically stated 'We need not determine at this time what those precise limits are'.

¹⁶ Troy A Rule, 'Airspace in an Age of Drones' (2015) Boston Uni L Rev 155, 169

¹⁷ Dolan and Thomson, 'Integration of Drones into Domestic Airspace : Selected Legal Issues' (Congressional Research Service, 2013) 9.

¹⁸ Banner, *Who Owns the Sky? The struggle to control airspace from the Wright Brothers on* (Harvard University Press, 2008) 259-60 reported that cases on aerial trespass post-*Causby* 'became less common' and 'the aerial trespass debate largely fizzled out'.

¹⁹ Troy A Rule, 'Airspace in an Age of Drones' (2015) Boston Uni L Rev 155, 169-170 notes: 'Unfortunately, *Causby*'s indefinite rules for demarcating interests in low- altitude airspace are already proving problematic in this new era of domestic drones.' See, for example, Bruce Schneier, 'Is it OK to shoot down a drone over your backyard?' <<http://edition.cnn.com/2015/09/09/opinions/schneier-shoot-down-drones/>> [Accessed 29 October 2015]; Ryan Cummings, 'Hillview man arrested for shooting down drone; cites right to privacy', <<http://www.wdrb.com/story/29650818/hillview-man-arrested-for-shooting-down-drone-cites-right-to-privacy>> [Accessed 14 October 2015].

²⁰ According to the National Conference of State Legislatures, as of August 2015, 20 states have passed 26 pieces of legislation targeted at drone usage. See <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> [Accessed 29 October 2015].

²¹ For example, in Tennessee, the Freedom of Unwarranted Surveillance Act (SB-0796) makes it a crime to fly a drone into fireworks displays or over prisons.

²² For example, in New Hampshire, SB 222 prohibits the use of unmanned aerial systems for hunting, fishing, or trapping.

²³ For example, in Florida, the Freedom from Unwarranted Surveillance Act 2013 prohibits the use of a drone to capture an image of privately owned property or the owner, tenant, or occupant of such property, in the absence of consent if a reasonable expectation of privacy exists.

²⁴ See <https://www.gov.ca.gov/docs/SB_142_Veto_Message.pdf> [Accessed 03 November 2015]. The original bill is available to view at

<https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB142> [Accessed 03 November 2015].

²⁵ For complete voting results, see

<https://leginfo.legislature.ca.gov/faces/billVotesClient.xhtml?bill_id=201520160SB142> [Accessed 03 November 2015].

²⁶ See <https://www.gov.ca.gov/docs/SB_142_Veto_Message.pdf> [Accessed 03 November 2015].

²⁷ See <https://www.gov.ca.gov/docs/SB_142_Veto_Message.pdf> [Accessed 03 November 2015]. Note the bill was opposed by powerful interested parties including tech industry companies and trade organizations such as the Consumer Electronics Association (in which Amazon and Google are members) and GoPro.

²⁸ Troy A Rule, 'Airspace in an Age of Drones' (2015) Boston Uni L Rev 155, 159.

²⁹ Troy A Rule, 'Airspace in an Age of Drones' (2015) Boston Uni L Rev 155, 159.

³⁰ See the Irish Aviation Authority (Rockets and Small Aircraft) Order SI 25 of 2000. Aeronautical Notice O.63 provides 'Small Aircraft' within the meaning of the Rockets and Small Aircraft Order shall include: 'Any Remotely-Piloted Aircraft (RPA) or Remotely-Piloted Aircraft System (RPAS) being a remotely-piloted aircraft (system), its associated remote pilot station(s), the required command and control links and any other components as specified in type design.' Pursuant to section 5(3)(c) of the Order, a person who has charge of

the operation of a small aircraft, which weighs more than 7 kilograms (but not more than 20kgs) without fuel, but including any articles or equipment installed in or attached to the aircraft at the commencement of its flight, shall not allow such an aircraft to be flown 'at a height of more than 400 ft (120metres) above the surface of the earth, unless the permission of the Authority has first been obtained'. Although the IAA has recently released its proposed new Small Unmanned Aircraft (Drones) and Rockets Order which it hopes will replace the former Order, the 400 foot ceiling is retained.

³¹ Naturally any such clarification of the property entitlements of land owners in the airspace over their property would have to form part of a wider review and assessment of the suitable locations for drone usage, clarifying, perhaps, certain public areas where drone usage could be permitted – so-called drone-zones.

³² Sub-dividing the airspace in this manner would also seem to have the support of some major companies heavily invested in drone use. Amazon, for example, has proposed that the airspace located between 200 feet and 400 feet should be reserved for state-of-the-art drones. See Ed Pilkington 'Amazon proposes drone-only airspace to facilitate high-speed delivery'

<<http://www.irishtimes.com/business/transport-and-tourism/amazon-proposes-drone-only-airspace-to-facilitate-high-speed-delivery-1.2300195>> [Accessed 28 Oct 2015].

³³ Similar such requirements are currently in place in Austria where permission to fly commercial drones is granted.

³⁴ Difficulties might also be encountered in identifying the owner or operator of the trespassing drone. To offset this difficulty, it is possible that all drones should be registered with a marker, akin to a chassis number, printed on the undercarriage of the drone.

³⁵ IAA, 'Operation of Remotely Piloted Aircraft Systems in Irish Airspace'

<<https://www.iaa.ie/index.jsp?p=100&n=107&a=406&pp=413&nn=428&IID=956#sthash.IGWvl0qR.dpuf>> [Accessed 03 November 2015].

³⁶ Speaking at the inaugural 'Meet the Drones' open day organised by the Unmanned Aircraft Association of Ireland (UAAI) (21 August 2015).

³⁷ Speaking at the inaugural 'Meet the Drones' open day organised by the Unmanned Aircraft Association of Ireland (UAAI) (21 August 2015).