

Ellipsis Earth FAQs for public/press

About Ellipsis Earth Flight Team:

'The Ellipsis Earth Flight Team are fully qualified, experienced and insured commercial UAV pilots with experience operating in some of the harshest, most remote and most difficult terrains in the world. All surveys are conducted to the highest safety standards and exceed the required UK regulatory protocols. We are proud ambassadors of #dronesforgood and responsible drone flight, aiming to demonstrate the positive use of drones and their potential as a scientific tool. We do not capture any imagery of private land or property, or any identifiable persons, and our imagery is shared and stored securely according to GDPR regulations.'

Specific FAQs:

What are drones?

A 'drone' is the common name (also known as a UAV or UAS) for an unmanned aerial vehicle which is operated by a ground-based pilot using remote control. Drones have a wide range of beneficial commercial applications, from environmental surveying, weather sensor deployment, agricultural monitoring, remote delivery of healthcare and aid, and film and media production. More advanced drones can also be used for surveillance and security purposes although these are usually restricted for military or government use.

The drones used by Ellipsis Earth are small, lightweight commercial models which fall under standard commercial UAV flight regulations as required by the UK Civil Aviation Authority.

What imagery will you be capturing?

For the Leave Only Footprints campaign with Hubbub and BCP council, Ellipsis Earth will be capturing aerial imagery and video of selected sites across the conurbation of Bournemouth, Christchurch and Poole. These sites include areas of public beach between Hengistbury Head and Sandbanks.

Our Flight Team will operate during very early morning hours, from 4:00am to approx 07:30am, when footfall is minimal to none and operationally pre the regular daily seafront beach cleans.

The imagery captured will be low altitude birds-eye view images of the beach sites from the water's edge to the top of the beach, of empty beaches in the early mornings, at 8 selected sites between Hengistbury Head and Sandbanks,

including Bournemouth Pier, Boscombe Pier, Alum Chine, Fisherman's Walk, Canford Cliffs and Southbourne beach.

How will the captured data be used?

The captured imagery will be processed by Ellipsis Earth software to automatically and rapidly detect discarded litter items and quantify them by type and brand. This information will then be mapped to create heatmaps of litter across the sites. This data, along with expert analysis and recommendations, will be shared with BCP council, Hubbub and McDonald's, to help them better understand and mitigate against littering levels in the region.

Will you be surveilling people?

No. The surveys will be taking place in the early hours of the morning, and Ellipsis Earth does not conduct flights over people for safety reasons. In addition, our software

automatically rejects any identifiable images of people, pixelating them and then deleting them from our system to avoid any issues with identification.

Is this an invasion of privacy?

No. Our drones are not equipped with any surveillance technology or capabilities beyond still image or video. Ellipsis Earth operates on public land with council permission in open airspace and gathers legally compliant imagery of the ground only. Any identifiable persons or property are not used nor stored in our databases, and we are fully compliant with UK and international GDPR regulations.

What are the dangers of drone use?

Drone operation is a heavily regulated industry with a great deal of safety and security protocols to ensure minimal risks are associated with safe operation of any UAV. The dangers of drone use include rogue flight, loss of remote connection, mechanical or pilot error leading to the collision or grounding of a UAV, damage to people or property, or security risks of entering restricted airspace. Ellipsis Earth takes every precaution to ensure these risks are absolutely minimal and does not operate under any conditions where these risks are elevated in any way. All flights are conducted by experienced pilots under full risk assessments, with all necessary clearances and permissions, and with global public liability insurance.

Will the drones disturb local wildlife or my dogs?

One of the risks which Ellipsis Earth mitigates for in its planning phase is to minimise or eliminate any disturbance to wildlife from its drone operations. We

select the model of drone to be flown based on a number of factors including weather, windspeed, image quality etc but also the size and noise profile, which we can reduce to be minimally invasive to local wildlife. Throughout this project we will avoid any flight in areas where local populations of skylarks are known to be nesting, for example close to Hengistbury Head, and we avoid all nesting areas during nesting season. We also fly at times of day where public use of the beach is limited, and in dog-controlled areas where possible. Our Flight Team is on hand at all times to inform all beach users and anyone with dogs off-leash of our operation and to direct all flights in consideration of the presence of dogs, especially during take-off and landing.

What qualifications do you have?

The Ellipsis Earth Flight team are fully qualified, experienced, insured and advanced UAV pilots and copilots with full UK CAA-approved commercial UAV licenses.

Ellipsis Earth CEO and Founder Ellie Mackay, who heads up our Flight Team, has over 1000 hours of flight logged globally, having flown in extreme environments as a research scientist and award-winning documentary filmmaker as well as for humanitarian relief agencies in disaster zones. Mackay is a judge for the global Airwards which recognise leading innovative drone use, and was featured in The Guardian's Woman in Tech in Nov 2018 as one of the UK's leading female drone pilots.