

DJI P4 RTK

THE PHANTOM 4 GOES PRO

TEN OF THE BEST

THE TOP TIPS YOU NEVER KNEW ABOUT

• **YOUR ESSENTIAL DRONE GUIDE** •

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DRONE

MAGAZINE

DJI PHANTOM 4 RTK

READY TO BRING MAPPING TO THE MASSES?

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AMAZING
DRONE
TRICKS

**UK DRONE
SHOW**

THE BEST OF BRITISH

**RECORD
BREAKER**

THE NEED FOR SPEED

**HOLYBRO
KOPIS 2**

"THE BEST QUAD
I'VE EVER FLOWN"

**MAP THE
PLANET**

13,000KM...
AND COUNTING!

LONGER FLIGHTS!

SOME ESSENTIAL SOLUTIONS TO EXTEND YOUR FLYING TIMES



All photos by Gareth Rowan



THE SKY IS THE ONLY LIMIT

Gareth Rowan's mantra is that "there's an ability in every disability". Ian Collen finds out how he's overcome adversity to become an accomplished drone pilot...

Back in 2014 Gareth Rowan was living something of a dream lifestyle. After leaving university he was able to combine a passion for sailing with travelling and got himself a job sailing around the world. Coincidentally that was also the spark for his interest in photography because when you're touring the Caribbean, Mediterranean and Pacific, there are some pretty great places to shoot along the way.

However, in April that year things changed. "I was in Antigua at the beach and I just had some sand on me, so I thought I'd dive into the water to get the sand off," Gareth explained to us. "But when I dived into the waves I hit my head on a sandbank." This left him with a B4 level burst fracture, "which basically means I don't really have any movement below my shoulders. I ended up in Miami doing rehab there for about six months before being transferred back to Belfast."

Gareth says he already had an interest in drones before the accident, and was looking into buying a Phantom 2. "But once I'd had the accident I didn't have much movement in my arms so I started to research ways that I could do it – and then I found that the Parrot Bebop 2 could be flown from a phone using little virtual joysticks." He says that,



along with seeing a friend getting good photos and videos with a drone, helped to give him the drive to get airborne. "It was more of a challenge for myself; to give me something to aim for – so originally it was just for fun."

PREPARING FOR TAKE-OFF

Learning to fly can be difficult for any would-be pilot, but obviously Gareth had more to contend with than most. He was able to use flight planning software to do a lot of the

work, and used the likes of YouTube to see how others were flying and using various flight modes, and began to find other solutions to develop a viable control system for what was then the 'new' Mavic Pro.

"I got an Android tablet that I could use with an assistive mouse called GlassOuse," he told us. "That meant that I could use the functions on the Android tablet a lot easier, so I was able to figure out that if I had the Mavic Pro I would be able to use all of the intelligent flight modes."

With some help from his dad, Gareth was able to build a controller for it and, as he had been able to regain a little extra movement in his left hand, "we were able to figure out that if we had ping pong balls on the Mavic controller I'd be able to control it with my hand as well. So it was a combination of having the controller in the right position and the GlassOuse, and then I was really able to start to play around with things."

Although Gareth has been finding many ways of using assistive technology in all aspects of his life, this smart solution was all it took to get him flying, along with the drone's smart features such as Point of Interest and TapFly. As a result he's been able to develop what seems like a natural talent for aerial photography – as you can see from some of his photos on the following pages.

There are still some limitations to his work, or merely just temporary restrictions to overcome given how far Gareth's come already. "I only really have use of one arm so it's quite difficult to do panning shots, where maybe you're moving forwards and sideways at the same time. So that might be

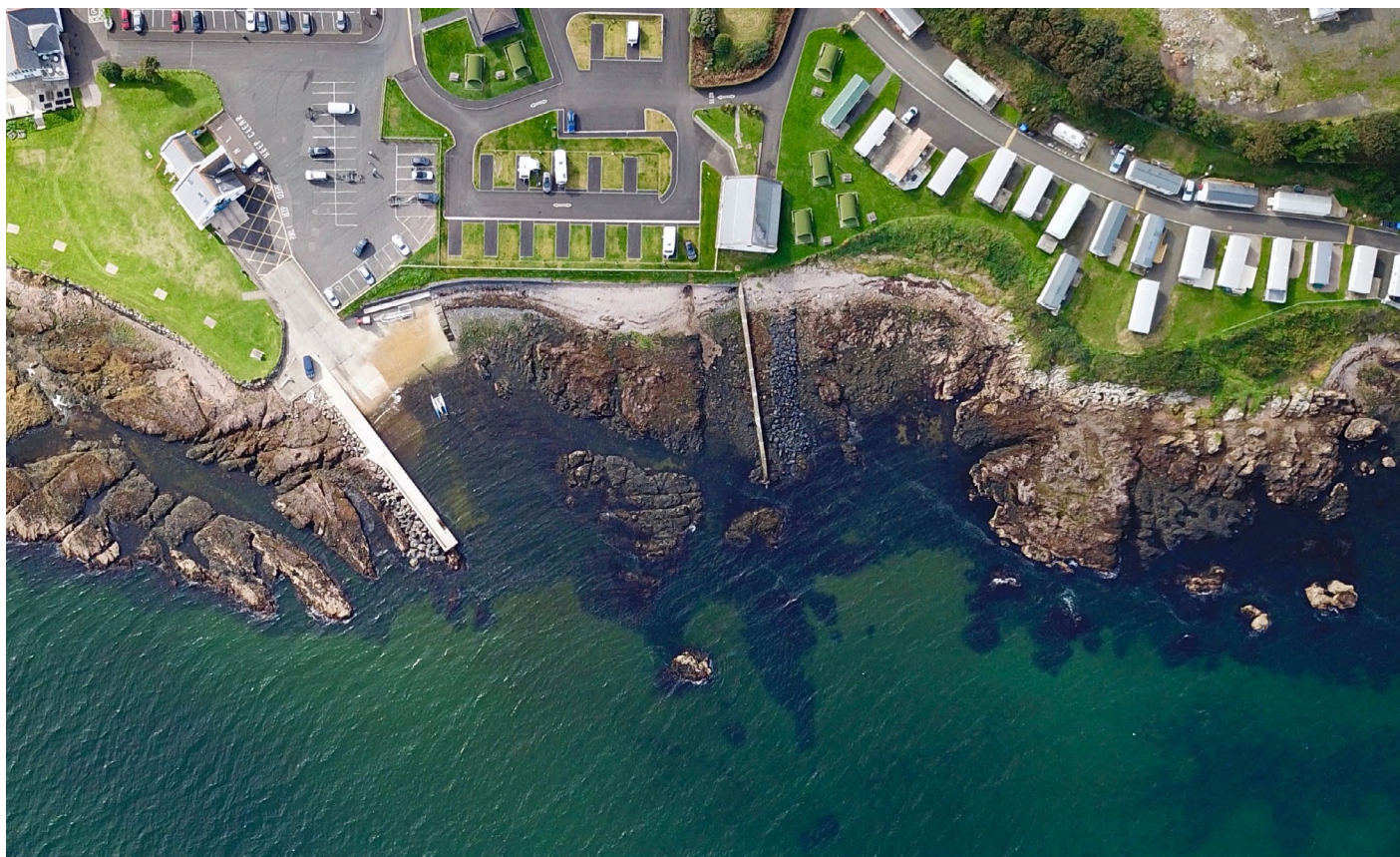


some kind of physical modification that I need to think of; maybe some kind of mouth or chin control to go sideways as I move. I think with the Mavic 2 and the new panning function on the camera that may open up a better flow to my shots."

He also points to recent advancements in gesture controls and says that a voice activated system would definitely be useful for bringing in further functionality, "but with the

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intelligent flight modes you can cover a lot of the bases, so it's just about trying to keep things smooth and making the best transitions between the different shots." As with many pilots, the lack of mission planning support within the DJI Go app is something Gareth laments, but he is looking into some of his other options.

SPREADING THE MESSAGE

After a few flights it appears that Gareth's impressive portfolio of photos and videos began to catch the eye, and he was recently featured on BBC's *The One Show* (only slightly less illustrious than appearing in this magazine!). After that he says he's had people getting in touch to find out more about how he's been able to fly, and a company from Hungary has also been in contact with a different type of assistive mouse which could help him.

For his part Gareth has produced a number of videos on YouTube and his own website that show the various

modifications and features that he uses. "I guess a lot of people still think that drones are really difficult to fly whereas with all the new technologies they're so simple. And with things like Return to Home, even if things do go wrong it will come back to you."

Gareth says he's also been helping with his local health trust, giving talks on the assistive technology he uses and how he's been able to fly. "They're very interested in seeing how I've adapted things to overcome the difficulties with the disability," he says. "The occupational therapists would be very interested in seeing how we've adapted the controller and how I can use the different assistive devices to fly the drone."

"I'm doing a talk in October called 'There's an Ability in Every Disability' and its aim is to show people that just because you have a disability it doesn't mean you can't do what you want to do – there are ways to work around things. Some people see drones as being something that are very difficult and might be more for specialised people. But then they see that I'm able to do it and then maybe they can show that to other people and say 'look at this guy here; he can fly his drone all over the place.'"

RISE ON UP

As his stock has risen, so has the potential for his drone work to expand into something more professional. He says he had considered getting a licence, "but because of the distance and the amount of time you have to spend in class I wouldn't be able to do it." However, there are growing opportunities for online training and at the time we spoke Gareth says one company was trialling an assessor not far from his home in Northern Ireland – "so hopefully I'll be able to start my training with them."

However, Gareth does point out that he doesn't see himself going full-time any time soon. "It would still be a bit of a part-time thing but I could use the commercial side of things to reach out to estate agents and businesses

and hopefully develop more on the photographic side of things. Where we live on the northern coast is an area of outstanding natural beauty so we are very close to lot of nice scenery, and I'm looking to develop the online and commercial side of things with videos as well."

We suggest that maybe one day he could become the pilot that follows the very boats he used to sail on, but he says that the travelling could be a problem because of his condition. However, he has had a few chances to get back close to the water, shooting videos of a nearby 'little boats' championship and says he'd love to do more. "They are generally very close to the land anyway so I'd be able to fly them; and as I get more confidence and my qualifications I'd be able to put myself out there and make some more videos and maybe start to earn a bit of money out of it."

In the meantime Gareth says he's keen to keep helping others to overcome their problems and maybe work with manufacturers to come up with some solutions. "I'd be very interested in working on a kind of consultancy basis, where I could say that this is what I did and how it would work for me. There are companies doing more to do with accessibility; Microsoft came out recently with an accessible and programmable controller so that you can control everything with buttons.

"When I began my research after the accident in 2014 that was when 3D Robotics had their drone out (the Solo) which had all of the intelligent flight modes in it. That was when I thought that if I can control a tablet then I can control one of those - and then when the Mavic Pro came out it kind of tied it all together. So it has taken big leaps and bounds and hopefully in the future there will be even more. I would like to see more accessible features in the future and I'd like to be



involved if possible." And we're sure Gareth would be able to put them all to very good use!

To see more of Gareth's photos and how he was able to take them, plus further information on assistive tech, head over to www.assistive-tech.co.uk/dronework. You can also find his appearance on *The One Show* on YouTube and on-demand services.

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