

An Electric Revolution in the Skies

Good afternoon everyone. It's fantastic to be at Cranfield.

A place that has played an integral role in the story of flight in this country.

So, this is a very apt location for one of my first aviation speeches as Transport Secretary – especially as a pilot who chaired Parliament's All Party Group on Aviation.

Now just as Cranfield has shaped UK aviation past and present...

This place will play a major part in its future too.

And today I want to talk about that future, both its challenges and the opportunities – and how we will rise to meet both.

We are today called to meet a challenge...

A priority so pressing that everything we do at the Department for Transport, and across government, must have regard to reducing CO2 emissions.

Some estimates suggest that aviation makes up 12% of average household emissions.

And forecasts suggest that within 3 decades that figure could grow to over a quarter.

With UK annual passenger traffic to soar from 292 million to 435 million by 2050.

A prospect both welcome for families and businesses but that requires action on emissions for the sake of our children and our fragile environment.

Now with this critical mission, comes a once in a generation opportunity.

British industry, and especially British aviation, can lead the world in the technological revolution we need.

We have done this before.

From the pioneering work of Sir Frank Whittle on the jet engine...

To the development of Concorde and the Harrier – a project in which your forebears at Cranfield were intricately involved...

We led the world in aviation innovation.

In my own constituency the world's first jet airliner was developed.

But we can leave nothing to chance in this great national endeavour.

I know that there's so much work already taking place.

The fuel efficiency of aircraft is steadily improving.

You're investing in the development of sustainable, low carbon fuels...

And you are even looking at the possibility of moving away from such fuels altogether.

While the government is doing its part...

And leading on the global stage...

We recently became the first major economy to make a legal commitment to net zero carbon emissions by 2050.

We've announced ambitious plans for the design and manufacture of zero emission vehicles...I drive one myself.

And within aviation – where I don't yet...

But I am proud that the UK has played a major role in creating the Carbon Offsetting and Reduction Scheme for International Aviation...

The first truly global scheme to address CO2 emissions in any single sector.

And we'll shortly consult on how we can ensure that aviation fully contributes to the UK reaching its net zero target by 2050.

But we need to keep up the momentum.

Today I've glimpsed the future with technologies being developed by some of you in this room...

Allowing the sector to thrive sustainably in the 21st century.

From a digital air traffic control tower to the Volante Vision.

The possibilities are boundless.

Take electric planes.

As someone who recently became the owner of that electric car...

I've seen how battery power allows us to reduce emissions from road vehicles...

But they also offer incredible economic potential for manufacturers and innovators.

So, I want to create an electric revolution not just on the UK's roads...

But also in our skies.

The UK led the world as a pioneer of international commercial flight in the 20th century...

And I want this country to become a hotbed for the design, manufacture and use of electric aircraft in the 21st...

Seizing a share of a market that could be worth £4 trillion globally by 2050...

And harnessing immense benefits of this transition:

- lower emissions
- greater efficiency
- and the power to transform mobility in towns and cities

I know that Cranfield and Loganair are developing hybrid electric aircraft for commercial passenger flights, through the Fresson Project...

To transport people in the Orkney Islands.

And the CAA is working with pioneering firms, such as air taxi company Volocopter...

And then there's the brilliant collaborative work taking place on the Airbus and Rolls-Royce E-Fan X Project.

But while I'm excited at the possibilities.

I'm also a pragmatist.

We need the right infrastructure, the right batteries and the right research...

To make the electrification of flights take off.

That's why I was delighted that the Prime Minister recently announced a £300 million joint investment...

From government and industry through the [Future Flight Challenge](#).

Money that will fund electric plane innovation...

And research into other forms of aviation technology...

Including flying taxis and freight carrying drones.

This is on top of the nearly £2 billion we are ploughing into aviation research and technology...

Through the Aerospace Technology Institute Programme.

Only yesterday, through that programme, the government awarded £2.7 million to a start-up company ZeroAvia...

To build a hydrogen fuel cell propulsion system that will aid the development of zero emission aviation technology in this country.

And work is taking place in the sector more broadly...

Take for instance, the £65 million Digital Aviation Research and Technology Centre being built here.

But another key part of our success will depend on ensuring the next generation is ready to take up the mantle.

Everyone, from FTSE 100 companies to tiny flying schools, will have a part in securing our future global leadership.

And I want to directly address General Aviation.

It's a sector that sparks imaginations, provides opportunity and incubates the aviation workforce of tomorrow.

Plenty of air cadets have been inspired to serve in the RAF after a glider flight at their local airfield.

Some of the best aviation engineers started out as flying school apprentices.

While countless commercial pilots obtained their licence at their local airfield.

So, it's vital that we protect our network of airfields where so many aviation careers first take flight.

That's why I'm delighted to appoint today Phil Dunnington as our General Aviation Advocate.

Phil was the first balloon pilot to cross the North West Arctic Passage and is a long standing champion of GA.

I know he will do a great job at representing the industry and raising its profile.

Because General Aviation will have a big part in solving some of the most pressing challenges facing the sector.

We must also recruit thousands more engineers, technicians and pilots...

And ensure we draw on all our country's talents.

In this country – the birthplace of Amy Johnson who flew solo from England to Australia in 1930 – just 6 in every 100 pilots are women.

While people from ethnic minorities are remain massively underrepresented.

I think general aviation could help address those issues.

By enabling young people of all backgrounds to gain a deeper understanding of what a career in flight might entail...

Whether that's by taking a trial flight in a light aircraft or talking to an aviator.

But as well as real, tangible experience – we also need to provide positive role models.

There's a saying: 'You can't be it, if you can't see it.'

That's why today I'm delighted to appoint 6 Aviation Ambassadors to inspire the next generation...

Break down any barriers...

And any lingering glass ceilings.

They are:

- Kirsty Murphy, a member of aerobatics display team, The Blades and the first woman to join the Red Arrows
- Patricia Mawuli Porter and Jonathan Porter who have overcome huge obstacles to pioneer flight training in Ghana for people from all backgrounds – and now here in the UK
- Kate McWilliams, who became the world's youngest female commercial airline captain at the age of 26
- Arthur Williams, a former Royal Marine, who trained to become an airline pilot after being paralysed in a car accident
- Jo Salter, the RAF's first female fast jet pilot

Together, with all of us, they will encourage the next generation of pilots, broaden access and drive social mobility throughout the sector.

So a big thank you to you all and of course also to Phil for your upcoming time, energy and expertise.

These appointments are a sign of this government's focus on ensuring that the aviation industry of tomorrow...

Is the very best it can be.

I want to turn briefly to our evolving role in the world.

Earlier this month I confirmed measures to ensure flights between the UK and EU will continue to October next year – whether we leave with a deal or not.

I also announced that my department would extend the UK's air traffic rights for EU airlines.

I know that preparing to leave the EU has meant hard work.

And the sector's response has been tremendous.

But I'd like to stress that our withdrawal from the EU means that we will continue to enjoy warm friendships with our close neighbours... And embrace the rest of the globe too.

I'm reminded of the first scheduled international commercial flight between London and Paris, that took off 100 years ago last month.

The flight of that little de Havilland plane was not only a feat of daring and engineering endeavour...

It was also an exercise in building international partnership – paving the way to the global aviation network we know today.

So now is the time to cement old partnerships and forge new ones...

With aviation at the heart...

Demonstrating we are truly Global Britain.

So finally, I'd like to thank you all for coming today.

This government's commitment to developing a truly low carbon economy has profound implications for every mode of transport.

And certainly, as I said at the start, the challenges facing aviation are considerable.

But as today has so clearly highlighted this is also a moment of opportunity.

Opportunities for the aviation industry to grow long into the 21st century.

Opportunities for this country to become a global trailblazer for a new generation of aviation technology.

And opportunities for us all to build a cleaner, greener, better connected world.

Thank you and I look forward to working with all of you in the months ahead.