

RAF's first synthetic fuel drone flight

Under Project Vermeer, the Royal Air Force has enhanced their ground-breaking work in using sustainable aviation fuel by successfully flying a four-meter drone with synthetic fuel.

Synthetic kerosene is entirely fossil fuel-free, made by mixing raw materials with high sugar levels, such as food waste, with bacteria to create an oil substance that is then converted into aviation fuel using chemicals and heat.

As the process does not require large-scale infrastructure, synthetic kerosene can be made anywhere, making it an attractive option for military deployments around the world.

The breakthrough signifies the RAF's commitment to creating a more sustainable future as it can be used across all platforms from remotely piloted air systems to fighter jets, with a significantly reduced carbon footprint compared to traditional fossil-based fuels.

Defence Procurement Minister Jeremy Quin said:

"This is an exciting moment for the RAF and British industry as they continue to develop pioneering solutions to help address climate change. These new approaches will maintain our world-class fighting forces whilst reducing our carbon footprint."

Air Vice Marshal Lincoln Taylor said:

"The RAF needs to ensure that we are at the forefront of technology to safeguard our own resilience and operational capability, whilst minimising our damage to the environment. Fuel scarcity and cost will only ever increase in its impact on our operations and synthetic fuels for our aircraft are one potential solution to this situation as we look to secure the objectives of the next generation RAF of tomorrow."

Working with British company C3 Biotechnologies Ltd and the US Navy, the initial trial created 15 litres of fuel in laboratory conditions. Following successful engine testing, the fixed-wing drone completed a 20-minute test flight in Wiltshire, providing valuable data that indicates the fuel performs consistently to a high standard.

Chief of US Naval Research Rear Adm Lorin C. Selby said:

"It is exciting and game-changing to work with our allies in the UK to develop a more efficient synthetic aviation fuel.

"The U.S. Navy is committed to finding innovative solutions to operational challenges, and the ability to manufacture this fuel without large

infrastructure requirements would be ground-breaking for deployed forces.”

The RAF and partners are continuing with the next phase of the project, with work underway to refine the process and develop deployable manufacturing facilities.

This is the second big win for the RAF as they secured a Guinness World Record four months ago with a [successful flight on synthetic fuel](#).

Project Vermeer began in summer 2021 and demonstrates the RAF’s commitment to investing in emerging technology, as highlighted in the Integrated Review and Defence Command Paper.

[Retirement calculator](#)

News story

GAD has developed a retirement calculator designed to help public sector pension scheme members understand benefits options information in their pensions more clearly.



GAD’s member-based innovation

The Government Actuary’s Department (GAD) has developed an online tool that provides benefits options information to public sector pension scheme members. The retirement calculator is designed to help people understand their pensions more clearly.

We developed the retirement calculator to help people understand their pension implications following the McCloud legal ruling. The judgment means some pension scheme members have a choice between 2 different types of benefits. The choice is between legacy schemes (typically final salary schemes) and reformed schemes (typically career average revalued earnings schemes.)

Working it out

The retirement calculator uses projections to illustrate what people will get at their chosen retirement age for both options.

Once people add in basic details, this new calculator takes pay rises and working patterns into account. The resulting information then helps scheme members to understand the different benefits they may be eligible for during the remedy period.

Understanding benefits

The idea was developed by GAD actuary John Bayliss. He said: "This is really about helping members understand their benefits and putting this into context. We expect this will sit along with other member information on pension portals. Once people answer some quick questions, the system will determine if they will be affected. It then refers pension scheme members to the retirement calculator.

"This is new for GAD and over the course of the last year we've had to learn some elements of how to do this from scratch. We intend to apply this learning in different areas such as live interactive reporting which we've not been able to do before."

Member-focused

GAD used web programming and software to make the retirement calculator more responsive and interactive. This is so that it leads to a better experience for clients and pension scheme members.

The first retirement calculator is set to go live in March and will be rolled out to several clients across the public sector throughout the UK in the coming financial year.

Published 16 March 2022

[Russia's ongoing war of aggression against Ukraine: UK OSCE statement, 16 March 2022](#)

Thank you Mr Chair. This statement is delivered under the topic raised by Ukraine and I request that this be accurately reflected in the Journal of the

Day.

Mr Chair, it is now nearly three weeks since President Putin launched his premeditated and unprovoked invasion of Ukraine and, as we have heard today, our Russian colleagues persist in playing the role of the Kremlin's storytellers, peddling their lies in an attempt to justify Russia's military action against Ukraine.

In February, during the run up to the invasion, more than 100 different stories promoting unfounded claims around pre-texts for invasion were identified as being disseminated by Kremlin-controlled media. Accompanied by baseless rhetoric and disinformation, our Russian colleagues blindly attempted to falsely cast Ukraine as a threat – but they fooled no-one.

And here and now, our Russian colleagues continue to lie in transparent attempts at disinformation to provide continued pretexts for military action. Last week, along with my Ukrainian and US colleagues, we exposed Russia's absurd accusations and lies surrounding the false notion that Ukraine sought to pursue offensive biological and nuclear weapons capabilities. That my Russian colleague's public reaction to delegations speaking the truth was "amazement" says it all.

Mr Chair, I would urge our Russian colleagues, who have a unique position in Vienna to see uncensored news from around the world reporting the truth, to take a moment. To consider their position, responsibilities and legacy as diplomats and citizens of Russia and stop their complicit propagation of President Putin's lies to their own people.

Whilst these lies continue, the Kremlin's war machine lumbers on. Frustrated by staunch Ukrainian resistance, the Russian military has increasingly resorted to attacking indiscriminately from distance using: Multi-launch Rocket Systems, Iskander Ballistic Missiles, Artillery, Air-to-Ground Attack and cruise missiles to attack all major Ukrainian cities, critical national civilian infrastructure, including sea ports, residential areas, and even hospitals. Russia is using cluster munitions and thermobaric rockets, weapons designed to inflict maximum damage wherever they are deployed.

Mr Chair, we heard my Russian colleague's ridiculous claims that Ukraine was responsible for the impact on commercial shipping in the region. I would note that it is Russian naval forces that have established a distant blockade of Ukraine's Black Sea coast, effectively isolating Ukraine from international maritime trade. And, it is Russia that has targeted several foreign flagged commercial vessels over the past weeks. Russian naval forces are also continuing to conduct missile strikes against targets throughout Ukraine.

Russia has unleashed a horrendous amount of violence on the Ukrainian people. In particular, the atrocious and indiscriminate destruction of Mariupol and the resulting civilian casualties is unforgivable. It should sit heavily on all of us in this room (including our Russian colleagues) as humans, diplomats, and military advisers. The UK has offered technical support to the International Criminal Court in bringing those responsible for war crimes in Ukraine to justice – including support in the immediate priority of gathering

and preserving evidence. Russian commanders carrying out war crimes should know they cannot act with impunity. The world is watching, and their actions risk landing them in a jail cell. Nobody is forgotten, and nothing is forgotten.

Mr Chair, my Russian colleague again insisted that the so-called "Special Military Operation" is going to plan. But it is not. For the first time this week, Russia has finally admitted so. The Chief of Russia's National Guard, Viktor Zolotov, announced it should my Russian colleague need the reference. Russia is paying a high price for each advance as the Ukrainian Armed Forces continues to offer staunch resistance across the country.

The Ukrainian people's response in the defence of their homeland against a foreign invasion has been stoic, united and defiant. From President Zelenskyy's leadership from Kyiv to the thousands upon thousands of Ukrainians who have volunteered to join the territorial defence, their displays of courage, determination, and resolve will go down in history.

The United Kingdom, along with many others, repeatedly warned that any Russian military incursion into Ukraine would be a massive strategic mistake and would come at a severe cost. In this regard, we continue to support Ukraine, our friends, in their fight for their homeland.

We have so far provided Ukraine with nearly 4000 light, anti-armour defensive weapons systems or NLAWs, and we will shortly begin delivery of a small consignment of anti-tank Javelin missiles as well. These help Ukraine defend against the armoured forces threat it faces.

The UK Government has also taken the decision to explore the donation of Starstreak, high velocity, man-portable anti air missiles. This defensive weapon system would allow the Armed Forces of Ukraine to better defend their skies.

Mr Chair, I would reiterate, all of our support to the democratic sovereign nation of Ukraine is defensive in nature and will help them defend themselves against this Russian war of aggression.

We will make the Russian government pay the price of its actions. The UK stands with the Ukrainian people in their fight for their homeland. We will work with our partners – for however long it takes – to ensure that the sovereignty, territorial integrity, and the independence of Ukraine is restored.

Thank you. And I ask that this statement be attached to the journal of the day.

CMA clears Sony's acquisition of AWAL

The Competition and Markets Authority (CMA) referred the merger to an in-depth Phase 2 inquiry in September 2021, after identifying competition concerns during its initial Phase 1 investigation.

In February 2022 the CMA provisionally concluded that the deal does not substantially reduce competition in the UK and may not be expected to do so in the future. Following a consultation that ended on 4 March 2022, the CMA has upheld its provisional findings and cleared the deal.

Sony is one of the three major record labels active in the UK today, along with Warner and Universal Music Group. In addition to its main label offering, Sony Music Entertainment, Sony also owns The Orchard, an A&L services provider. A&L services typically cover promotion, marketing and distribution. They also allow artists to retain full ownership of their copyrights and a greater percentage of royalties. A&L contracts tend to provide a narrower set of services with less financial support and shorter-term contracts than traditional record contracts.

AWAL is an emerging music distributor offering an alternative to traditional music deals by providing both A&L services and a 'DIY platform' that allows artists to upload their own music for distribution.

The CMA's inquiry focused on the 2 main areas in which the firms' businesses overlap. It assessed the extent to which The Orchard and AWAL may be expected to compete to provide A&L services. It also looked at how closely Sony and AWAL may be expected to compete to sign successful artists, and those with the potential to become successful, where higher levels of support and investment are provided.

The CMA found that, while not currently competing closely due to their different areas of focus, The Orchard may have become a stronger rival to AWAL in the supply of artist services in future. However, there are many other providers who will continue to compete effectively with both firms – including independent A&L companies, the A&L branches of the other major labels (like Warner's ADA and Universal Music Group's Virgin) and independent labels.

In terms of its rivalry with Sony, AWAL is still a relatively small player when it comes to signing artists who require higher levels of support and investment. Despite trying to expand its offering, AWAL was expected to continue to compete with Sony only on a limited basis. In the course of its investigation, the CMA also found that many other firms have begun providing similar services which can be expected to make up for the limited loss of competition from AWAL.

As part of its assessment, the CMA considered a wide range of evidence, including thousands of internal documents from both firms, evidence submitted by their competitors and customers, and its own analysis of market

conditions.

Margot Daly, Chair of the independent CMA Inquiry Group, said:

We launched this inquiry as we wanted to be sure that this deal wouldn't lead to worse outcomes for artists and fans. The music industry is vital to the UK economy and effective competition ensures that it works for everybody.

Having carefully assessed the merger we found that it is not likely to affect competition in a way that will reduce the choice or quality of recorded music available or increase prices.

For more information, visit the [Sony / AWAL merger inquiry page](#).

The CMA is committed to making sure markets are working well for music fans and [recently launched a separate probe into music streaming](#), paying particular attention to the roles played by record labels and music streaming services.

1. All the CMA's functions in Phase 2 merger inquiries are performed by inquiry groups chosen from the CMA's panel members. The members of this inquiry group are Margot Daly (Chair), Paul Hughes, John Thanassoulis and Ashleye Gunn. The CMA's panel members come from a variety of backgrounds, including economics, law, accountancy and/or business; the membership of an inquiry group usually reflects a mix of expertise and experience.
2. The CMA ran a 3-week consultation on the provisional findings up to 4 March 2022, during which time anyone could make submissions to the CMA. The responses are published on the merger [inquiry page](#).
3. The CMA is the UK's primary competition and consumer authority. It is an independent non-ministerial government department with responsibility for carrying out investigations into mergers, markets and the regulated industries and enforcing competition and consumer law.
4. The CMA launched a separate [market study into music and streaming services](#) on 27 January 2022.
5. For media queries, please contact the press office via press@cma.gov.uk or on 020 3738 6460.

[Skills Minister delivers keynote speech at International Higher](#)

Education Forum

Good morning everyone thank you so much for inviting me to speak to you.

It's wonderful to have the opportunity to talk about the importance of international higher education. It's a fascinating part of my brief at the Department for Education – and one whose significance I believe has, over the past few dismal weeks, become ever more important.

The opportunity for people – particularly young people – to study in other countries, to weigh their views and experiences against those of other cultures as they develop their minds and lives is so extraordinarily important at all times. But as we see the world begin to fracture once more into different spheres of influence and thought that importance grows.

This audience does not need me to tell it that the universities of the United Kingdom have a hugely significant role to play – not just because our country is one of the great global leaders in student recruitment, not just because the appetite of foreign students to live and study in our country is ever increasing – but most centrally because of what our universities represent.

I think of course of exceptional traditions of academic excellence. But what has made that excellence, what has enabled it to flourish and survive is liberty. Liberty is today under attack in the world. No where more violently and obviously than in Ukraine.

We should all be proud that the UK continues to be at the very forefront of international efforts to support the resistance to tyranny in Ukraine. In my department we are trying to do our bit too.

We have been working closely with the higher education sector and across Government to ensure that Ukrainian students are supported during this difficult time.

I am very pleased to say that this includes new visa concessions announced by the Home Office for Ukrainian nationals, including students, that will provide them with an opportunity to extend their leave or switch to a Graduate visa without having to leave the UK.

We recognise the current uncertainty is going to mean that many students may experience additional challenges and I very much want to thank the HE Sector for the remarkable work they have already done in supporting Ukrainian students, from providing crisis counsellors to making Student Hardship Funds available for students who need financial assistance, to simply showing friendship.

So, before I go on, I would like to emphasise my gratitude to the sector for all your hard work – and all the support I know you will give in the months ahead.

It is a great testament to you that the UK has remained the destination of

choice for so many international students.

Your world-class reputation, your globally renowned teaching, your cutting-edge research and innovation.

Our International Education Strategy, published in 2019 and updated last year, is pivotal to protecting and enhancing your reputation.

At the heart of this strategy are two principal ambitions which we want to achieve by 2030.

First, to increase the value of our education exports to £35 billion per year. And second to host at least 600,000 international higher education students in the UK per year.

Well, we are already delivering against both of these ambitions.

In 2019, the value of education exports was estimated to be £25.2 billion an increase of over 8% in just a year.

I was incredibly proud that we met our international student recruitment ambition for the first time in 2020/21 – nearly 10 years early – with 605,130 international students, studying in the UK.

Clearly, as you have demonstrated, the sky is the limit. But now you've burst through the sky – where next?

There are several parts to this answer, but the first and most obvious is that we, in Government need to work with you to support every part of the international student journey from application to employment.

This includes optimising the application process for potential students, raising awareness of private finance options, and looking at best-practice in graduate employability.

There is much more to be done, but doing these things will make sure the UK remains highly attractive to international students.

There are, of course, challenges.

We cannot ignore the uncertainties of recent years – further demonstrating the need for our institutions to diversify their intake of international students – and broaden the regions they recruit from.

We are already seeing progress, we've seen notable increases in student entrants from our priority countries. In 20/21 entrants from Nigeria rose by 89% and those from India by 27%. This is a brilliant endorsement of our improved student offer including the Graduate route.

Not only to ensure sustainable future recruitment, but to guarantee we continue to benefit from the diversity, fresh ideas and new perspectives that international students bring to our campuses.

As you well know, the UK's international higher education offer is more than just international students. You represent world beating research institutions. Your transnational education – or TNE – programmes mean that students all over the globe can access a UK education, wherever they may be.

As we continue to reform our post-16 sector, I think there is very great potential for the sustainable growth of TNE.

Education exports from UK HE transnational education have been rapidly growing in value – almost doubling in 10 years, from £350 million in 2010 to £690 million in 2019.

I want the UK to remain at the forefront of innovation in TNE provision especially as we look to what we have learned over the past few years.

The work of the International Education Champion, Sir Steve Smith, is integral to the continuing success in growing UK education exports. I know many of you will know Steve. I hope you continue to engage with him in this exciting mission.

He is working across five priority countries: India, Indonesia, Nigeria, Saudi Arabia and Vietnam to open up export growth opportunities for UK education.

We want to offer our full support for education exports and trade.

As you know, the UK now has an independent trade policy, which we are using to shape the future of UK trade around the world, bringing benefits to the education sector and those of the countries that we trade with.

We very much want to support the sector as best we can in negotiations.

So we're working with the Department for International Trade promoting education in Free Trade Agreements and ensuring the sector's views are represented.

Now more than ever, the Government is seeking to strengthen our relationships with partners and allies around the world.

This is all part of our ambition for a Global Britain – with close and strong relationships in every continent, championing the rules-based international order, standing up for and promoting British values across the world.

Education, as one of the UK's soft power strengths, has a pivotal role to play in delivering this ambition.

One such example is the 2030 roadmap for India-UK future relations, launched last year by the Prime Minister and Indian Prime Minister Modi.

Through this ambitious Roadmap, we will elevate the India-UK relationship and guide our cooperation for the next ten years covering all aspects of our multi-faceted relations through education exports.

In 2020/2021, the UK welcomed 53,015 Indian students to the UK. I look forward to building on this success and our wider relationship with India.

Despite the impact and uncertainty of the last two years, I am proud to say that our collective, global efforts are supporting a new generation of young people to access and enjoy life changing international experiences wherever they study.

Aptly named after Alan Turing – father of computing and World War Two codebreaker – who studied for a time in the United States, our Turing Scheme is truly global, with this year's participants planning to travel from their schools, colleges and universities to study and work across the globe in over 150 destinations.

Through study or work experience abroad, we want to support people from across the UK to experience the world. To support this ambition, we have confirmed funding for the continuation of the Turing Scheme for the next 3 years, including £110 million for the 2022/23 Academic Year.

My department has been promoting Turing across the world with ministerial discussions in the US, Canada, Germany, France, Spain, Switzerland, Australia, India and others throughout the Commonwealth.

It has been excellent to see such positive engagement, and I look forward to seeing how UK institutions will continue to build and strengthen collaborative partnerships overseas as we move into the second year of the scheme.

We have now announced plans for applications for the second year of the scheme, which will provide funding for mobilities in the 2022-23 Academic Year.

I urge institutions who want to take advantage of the opportunities offered by the scheme to register their interest now on the Scheme's website and to start preparing their bids.

I am extremely proud of the work the higher education sector and Government have achieved over the past year.

As we step into the future, the positive lessons we have learned from the past year will play a crucial part in growing the UK's education offer and strengthening the UK's global agenda.

I strongly believe in the power of education to help us solve global challenges.

When I graduated (a long time ago) the Vice Chancellor said words to the effect of "some may see our ceremony today as arcane – I hope you will see it as an event which connects you with the greatest tradition of free thought and inquiry to be found anywhere in the world. I hope you will be proud of that and seek to preserve and protect it for future generations."

I want more international students to come to the UK not just because

it's good for our economy, not just because its good for those universities' balance sheets, but because it will enable students from around the world to learn at our remarkable universities which continue to preserve and protect – for the world – the greatest traditions of free thought and inquiry.

Thank you for listening and thank you for all you do.