

Life-size replica rocket lands in London

Thousands of people visited the exhibition, led by the UK Space Agency, as part of the countdown to the first launch by Virgin Orbit from Spaceport Cornwall.

Families took part in a range of exciting, free space-themed activities and hands-on exhibitions, including a Virtual Reality experience offering the opportunity to experience what it's like to be at Mission Control, the chance to try on a real astronaut suit and handle a real meteorite.

Science Minister Nusrat Ghani, who officially opened the event, said:

We are proud to be playing an important part in the first ever satellite launch from UK soil, and we want to harness this incredible opportunity to inspire more young people to consider careers in science, engineering and space.

By establishing the UK as the leading European base to launch small satellites, we can build on our existing strengths in space manufacturing to create new jobs, grow the economy and attract significant investment into our growing space sector.

UK Space Agency Deputy CEO Ian Annett, Squadron Leader Mathew Stannard Chief Pilot Virgin Orbit, Virgin Orbit CEO Dan Hart, Melissa Thorpe, Head of Spaceport Cornwall, Science Minister Nusrat Ghani, UK Space Agency Director of Commercial Spaceflight Matt Archer, Felicity Buchan MP for Kensington, Dr Julia Knights Deputy Director of the Science Museum and Councillor Emma Will, Royal Borough of Kensington and Chelsea. Credit: UK Space Agency

Following a successful wet dress rehearsal by Virgin Orbit in the US, the real LauncherOne rocket and its carrier aircraft – an adapted Boeing 747 dubbed “Cosmic Girl”– arrived in the UK last week. The integration of customer satellites into the rocket has been taking place in the newly inaugurated [Space Systems Integration Facility \(SSIF\) at Spaceport Cornwall](#).

The mission, which has been named ‘Start Me Up’ in tribute to the iconic British band, the Rolling Stones, will mark the first orbital launch from the UK, meeting a key ambition of the Government’s National Space Strategy, as well as the first commercial launch from Europe and the first international launch from Virgin Orbit.

Ian Annett, Deputy CEO at the UK Space Agency, said:

Our work to establish launch capabilities in the UK is already bringing new growth through investment and jobs into local communities, and inspiring a new generation of space professionals whether in science, engineering, law and other disciplines.

A strong space sector depends on attracting future talent, so it was fantastic to see so many young people inspired by our full-size replica rocket in the centre of London and the activities this weekend. I hope we have ignited a passion for future space careers in many of them and made people aware of how space contributes to global sustainability and our prosperity as a nation.

Science Minister Nusrat Ghani and UK Space Agency Deputy CEO Ian Annett.
Credit: UK Space Agency

The activities were supported by Virgin Orbit, Spaceport Cornwall, the Science Museum, Imperial College London and the Natural History Museum.

Virgin Orbit CEO Dan Hart said:

I'm proud to stand alongside this distinguished group as we strive to bring a historic launch into space from UK soil – the first in many more milestones to come as the United Kingdom enters a new era as a leading space economy, opening up opportunities for the generations of scientists, engineers, and explorers we see here today.

This launch is being enabled through the dedication and hard work of so many, and we at Virgin Orbit are so very honoured to be playing a part in it.

Squadron Leader Mathew Stannard, Chief Pilot, Virgin Orbit, who will pilot the plane that is set to launch the rocket, said:

I'm really excited to be here. Normally rockets are a business – we build it, we ship it, we get it ready, and we launch it. So to actually have a model one here to show people is really cool. Most people come up to you and ask, 'Is this something you're doing in five years time?', but no, we're weeks away from launch now.

The flight manifest includes payloads from seven customers, based in the UK and internationally.

The UK Government's [National Space Strategy](#) sets out how the UK will become the first country in Europe to launch satellites into orbit in 2022. Spaceport Cornwall is one of seven spaceport sites being developed across the UK which will help unleash a wave of innovation and create hundreds of new

jobs across the country. All UK launches are subject to receiving a licence from the Civil Aviation Authority.

[Ancient mystery of European eel migration unravelled to help combat decline of critically endangered species](#)

- Environment Agency's world-first research will help combat dramatic decline of the critically endangered European eel
- Adult European Eels tracked to the Sargasso Sea for the first time, unravelling a mystery that has perplexed scientists for centuries
- Journey of the European Eel to its spawning area considered one of the most impressive feats of animal migration observed in nature

A team of researchers led by the Environment Agency have taken a major step forward in solving one of nature's most enduring mysteries – where do European Eels spawn and how do they get there?

Having suffered a 95% decline in numbers returning to Europe's rivers since the 1980s, the European Eel is now a critically endangered species.

But ground-breaking research published this week enables us to better understand the lifecycle of this globally important but little-known species and ensure effective protection measures are put in place to combat their decline.

Project lead and Environment Agency researcher Ros Wright said:

The European Eel is critically endangered so it is important that we solve the mystery surrounding their complete life-cycle to support efforts to protect the spawning area of this important species.

This is the first time we've been able to track eels to the Sargasso Sea and we are delighted we have the first direct evidence of adult European eels reaching their spawning area. Their journey will reveal information about eel migration that has never been known before.

The journey of European eels to their breeding place in the Sargasso Sea is up to 10,000km and considered one of the most impressive feats of animal

migration observed in nature. It's a mystery that has perplexed scientists for centuries, with the first recorded evidence of scientists looking into this phenomenon dating back to the 4th century BC.

Working alongside the Zoological Society of London, Defra, Cefas, Natural England, the University of Azores and the Denmark University of Technology, the Environment Agency has produced the first ever direct evidence of European eels navigating the last 2,500km leg of their journey. Up until this point, no eggs or eels had been found to confirm this spawning ground.

Back in December 2018 and 2019, researchers fitted 26 large female European eels with satellite tags and released them from the Azores into the Atlantic Ocean. The Azores islands are close to the furthest known point on the eel migration route that was tracked by previous projects.

Programmed to detach and transmit their data after 6-12 months, data were received from 23 satellite tags at various stages of the journey, with six tagged eels reaching the Sargasso Sea. Data transmitted from these tags reveal the eels migrated consistently towards the Sargasso Sea and, remarkably, that this journey to their breeding grounds takes over a year.

Once eels spawn in the Sargasso Sea, their larvae return to the UK and other European waters via a different route, carried on ocean currents on the North Atlantic Drift. They then migrate into rivers as glass eels.

Unravelling the navigation mechanisms, routes taken and locating where eels spawn is critical for understanding the reasons behind their decline and putting in place targeted conservation measures to protect this globally important species.

Chair of the IUCN Anguillid Eel Specialist Group, Matthew Gollock from the Zoological Society of London said:

Populations of the European eel are at a historic low and the more we understand their life-history, the better we are able to develop conservation measures to address the critical status of the species.

Professor José Manuel N. Azevedo from the University of the Azores said:

This discovery emphasizes the role of the Azores in the life cycle of eels. It will help scientist and conservationists to push for measures to restore eel habitats across the archipelago.

The Environment Agency and partners will now conduct a deeper analysis of the satellite tag data to uncover further clues on how eels navigate to their spawning area. This is part of an ongoing project and field teams have

returned to the Azores to satellite tag eels with extended life tags to reveal more data on silver eel migration and spawning sites in the Sargasso Sea.

The Environment Agency continue to carry out research on all life stages of the European eel to inform conservation measures. This complements work around England to protect eels, for example improving eel pass design to enhance upstream eel passage into our rivers.

A47 – A11 Thickthorn Junction development consent decision announced

The application involves the improvement of the interchange between the A47 and A11, improving access into Norwich. The project consists of two new uni-directional slip roads connecting the A11 south to the A47 east with widening and full signalisation of Thickthorn Interchange the gyratory. The side road strategy will include mitigation measures for the severance issue caused to Cantley Lane South.

The application was submitted to the Planning Inspectorate for consideration by National Highways on 31 March 2021 and accepted for Examination on 28 April 2021.

Following an Examination during which the public, Statutory Consultees and Interested Parties were given the opportunity to give evidence to the Examining Authority, recommendations were made to the Secretary of State on 20 June 2022.

This is the 117th Nationally Significant Infrastructure Project and 44th transport application to have been examined by The Planning Inspectorate within the timescales laid down in the Planning Act 2008.

The Planning Inspectorate's interim Chief Executive, Navees Rahman said:

“The Planning Inspectorate has now examined more than 100 nationally significant infrastructure projects since the Planning Act 2008 process was introduced, ensuring local communities, the local authority and other interested parties have had the opportunity of being involved in the examination of projects that may affect them.

“The Examining Authority listened and gave full consideration to all local views and the evidence gathered during the Examination before making its recommendation to the Secretary of State.”

The decision, the recommendation made by the Examining Authority to the Secretary of State for Transport and the evidence considered by the Examining Authority in reaching its recommendation are publicly available on the project pages of the [National Infrastructure Planning website](#).

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Journalists wanting further information should contact the Planning Inspectorate Press Office, on 0303 444 5004 or 0303 444 5005 or email: Press.office@planninginspectorate.gov.uk

Notes to editors:

The Planning Inspectorate's National Infrastructure Programme of Projects details the proposals which are anticipated to be submitted to the Planning Inspectorate as applications in the coming months.

It can be viewed at <https://infrastructure.planninginspectorate.gov.uk/>

[Water company hit with combined fines of over £1.2m for pollution incidents in East England](#)

Anglian Water has been hit with fines totalling £1,221,000 after it admitted to causing pollution incidents in two separate court cases this week.

The water company was ordered to pay £871,000 after a catalogue of system and maintenance failures caused several incidents of pollution across Cambridgeshire, Buckinghamshire, and Northamptonshire across a five-month spell, between May and September 2019.

The list of process failures included reporting delays, faulty screening and a general breakdown in planning and maintenance, all of which caused damaging blockages and pollution. After one particular incident, a subsequent biological survey showed dead aquatic invertebrates for 1,500 metres. The court also heard how at one site an unchecked build-up of 'unflushables' such as cotton buds and sanitary pads caused a blockage resulting in discharge of settled sludge into the treated sewage.

The site was originally fitted with a screen to prevent blockages in the process but was removed in 2018. The court heard that increased cleaning had not taken place and no steps taken to reduce the risk of blockages caused by the removal of the screen.

The water company was also ordered to pay £37,605.13 in costs at Loughborough

Magistrates (Sep 12).

In a separate court case, heard at Cambridge Magistrates Court, Anglian Water was sentenced to pay £350,000 after a pumped sewer at Bourn Brook at Caldecott, Cambridgeshire, burst for the sixth time in several years. Officers visiting the site in September 2019 found ammonia and low oxygen levels in the water, posing a potential risk to wildlife at the site. Despite efforts from Anglian Water to stop the polluted water from spreading, its methods proved insufficient and a total of 4km of the watercourse was affected for at least five days.

Since 2004 the sewer, which is only 1.5km long, had burst 6 times. The court found that Anglian Water had been too slow in putting in place potential mitigation measures. They only located air valves, designed to reduce stress on the sewer, after the incident took place. These valves had been in place for at least 25 years.

Anglian Water pleaded guilty to causing poisonous, noxious, or polluting matter to enter inland freshwaters without an environmental permit, and were told to pay £28,025.66 in costs as well as a victim surcharge of £181.

Sir James Bevan, Chief Executive of the Environment Agency, said:

“Serious pollution is a serious crime and I welcome these sentences from the courts.

“The Environment Agency will pursue any water company that fails to uphold the law or protect nature, and will continue to press for the strongest possible penalties for those which do not.”

[COP President: Looking Back and Stepping Forward Wilson Center, Washington DC](#)

Good morning everyone. It's a pleasure to be here.

I want to start by thanking Ambassador Green, and Ambassador Quinville, for the warm welcome that I've had here at the Wilson Center.

I want to reflect back to nearly a year ago when the world came together, and we forged together the historic Glasgow Climate Pact.

I have to say that what we agreed in that Pact went further than actually many people had imagined was possible.

Thanks to the commitments made, both inside and indeed outside the

negotiating rooms, by both the public and private sector, we left Glasgow with what I described at the time as a fragile win.

The pulse of 1.5 degrees remained alive.

And we did this against the backdrop of an increasingly fractious geopolitics, and we had nearly 200 countries come together to join forces in the face of a shared global challenge.

Now almost a year on, it is just 23 days to COP27, the end of the UK's COP Presidency, and the end of my time as COP President.

And the transition to Egypt's Presidency is coming at a profoundly challenging juncture in our current geopolitics.

Vladimir Putin's brutal and illegal war in Ukraine has precipitated multiple global crises: from energy and food insecurity, to inflationary and debt pressures around the world.

These crises are absolutely compounding existing climate vulnerabilities, and of course, then the scarring effects of a once-in-a-century pandemic.

But as serious as these crises are, we must also recognise a seismic structural shift that is underway.

Our global political economy, built on fossil fuels for the last century, is in a state of flux.

Concurrently, leaders and their citizens around the world are dealing with spiralling climate impacts.

Climate catastrophes are becoming more frequent, and sadly they are becoming more ferocious.

In recent months, as you know, an area the size of the United Kingdom has flooded in Pakistan, with death, disease and the displacement of millions of people following in the water's wake.

The reality is that these events are becoming increasingly connected.

Extreme drought and heat, for example, amplify the drivers of migration, of supply chain fragility, and with significant disruption to major economic sectors, not least global grain production.

And so I have to say this to you that this is no longer something that happens to other people, somewhere far away.

Right here in the US, in recent weeks, Hurricane Ian has battered the East Coast.

There are serious concerns about defending the Eastern seaboard, and the genuine possibility that entire cities will have to relocate away from the coast in our lifetimes.

Earlier this summer, the Colorado River, which generates power for tens of millions of Americans and is a lifeblood for agriculture, was placed in an unprecedented state of emergency, due to falling water levels.

So the future that scientists and climate activists have long warned us about, and which has frankly been a reality for some of the most climate vulnerable countries for decades, is now a reality for many millions. It is a reality for us in this room.

And as the science continues to tell us unfortunately: the worst is yet to come.

Catastrophe for many millions more lives and livelihoods.

Costs soaring into the trillions.

And entire sectors becoming stretched, and uninsurable.

There was a report from the Australian Climate Council Study that came out this June that concluded that 1 in 25 Australian homes will become effectively uninsurable by 2030. 1 in 25.

So friends, we are in a new world.

And navigating this context is our defining challenge.

And frankly, it is a challenge that we will rise to, or fall short of, in this decisive decade.

And so today, from the vantage point of the ending of my time as COP President, I want to take stock of where we are.

And I want to start by recognising, and indeed championing, the fact that, in some quarters, outstanding work is being done to cement the gains of the Glasgow Climate Pact, and to take us further.

We are now part of an irreversible direction of travel.

Yes, there is still oil, gas and coal in use and production around the world.

But around half a decade ago, we passed a tipping point, when annual newly installed power from renewables surpassed that from coal, across the OECD.

And estimates suggest that by the middle of this decade, renewable capacity is expected to be up 60 percent on 2020 levels.

And leaders are across the world increasingly turning to renewables to guarantee cheaper, cleaner, and more secure power for their populations.

We have the Inflation Reduction Act here in the US. Countries like Australia are back on the frontline of the fight against climate change.

India has published a strengthened emissions reduction target, its 2030 Nationally Determined Contribution.

And as you heard I was just in Kenya, whose remarkable geothermal potential is truly a vision of a cleaner future.

Now people in my country talk about nuclear or fossil as baseload, but geothermal is doing that job in countries like Kenya.

The plant I visited, Olkaria, was already producing 1 gigawatt of power. Kenya has the potential for ten times more geothermal power.

And indeed if you look along that rift, there are many other countries that have potential as well.

Now businesses are also stepping up. They are reimagining ways of working on sustainability, rather than plastics, pollution and waste.

Just last week you will have seen that the world's biggest reinsurer and underwriter to nearly a quarter of the global economy, Munich Re, turned its back on oil and gas.

And civil society, represented in this room as well, is embracing the power of the collective, to make clear that it simply will not accept anything less than a net zero future.

Now, in all of this work, we are realising the growth story of this century.

A growth story that can deliver millions of green jobs in this decade, and economic development benefits.

A story in which collective action and rapidly increasing scale deliver vast benefits in terms of cost and innovation.

I mean just look at the extraordinary fall in the cost of renewables from which we are already benefiting.

Solar costs down 80 percent since 2010.

Wind power costs down by up to three-quarters since their peak just over ten years ago.

And all whilst we have experienced the largest ever annual increase in the price of wholesale gas.

And have a look at the sort of innovations that could see parked cars feeding energy back into the grid, or the electric cable cars I used to move around on my visit to Mexico City earlier this year.

And it is a future of hope, in which our cities become more liveable, and more breathable, our energy becomes cheaper, and cleaner, and our ecosystems become more robust.

But, despite all of this, I do find myself reflecting on three years in this role, and all the speeches and all the interventions I have given in literally every corner of the globe.

And I am reflecting on conversations I have had here in Washington over the past few days, and they bear remarkable similarity to conversations I was having three years ago, as a fresh-faced COP President-Designate.

And I've been reflecting on the G20 Climate and Environment Ministerial meetings in Indonesia, which I attended earlier this summer, where some of the world's major emitters threatened to backslide on commitments they had made previously, in Glasgow, and indeed in Paris.

And this all whilst the extreme weather events that I spoke about earlier, continue to batter and devastate countries and continents across the world.

And indeed, these extreme climate events are impacting communities in the very G20 countries which were pulling back on ambition in that Climate Ministers meeting.

So I have to say this very frankly to you friends, that there does remain a big deficit in political will.

In that can-do spirit which is so badly needed.

And I am left wondering what further evidence, and what further motivation, global leaders could possibly need to act.

It is unfathomable to me that we are not doing everything in our power to respond to the inevitable structural changes that we are facing, and to prevent climate catastrophe.

And we should be under no illusions.

We are not yet doing everything in our power.

So we have to ask ourselves: why are we not going further? Why are we not going faster?

Competing priorities, and the need to do more than one thing at once

Now, I do understand that leaders around the world have faced competing priorities this year.

But you know, we cannot tackle any of the crises we face in isolation.

And we cannot allow cyclical crises, as painful as they are, to distract us from the net zero transition.

Or, as my friend Mark Carney has put it, we must not fall victim to the "tragedy of the horizon".

Now that unfortunately happened amidst the Global Financial Crisis of 2008, just a year after hundreds of IPCC contributors were awarded the Nobel Peace Prize. And frankly many decided climate action could wait for the future.

And so we lost critical momentum as a result.

We must find the ability to focus on more than one thing at once.

And I am reminded, when I was the UK's Business and Energy Secretary.

My team and I worked to support businesses through the darkest and most challenging moments of the pandemic.

At the same time, the UK's Vaccine Taskforce sat in my government department, and I chaired our Ministerial Investment Panel, deciding which vaccines to back.

So, working around the clock for months, and supported by a team of outstanding civil servants, we delivered the UK's COVID vaccine portfolio.

And it was at the same time in that same year in my department we brought forward the UK's ambitious 2030 Nationally Determined Contribution.

So the point I am making is that it is possible to take on multiple challenges, and to succeed, even in the most challenging times.

And indeed, as many climate vulnerable countries have been recognising for some time, we no longer have the luxury of choice. We have to try and do this simultaneously.

But I have to say I think we also have to ask ourselves some more fundamental questions.

We are approaching the 27th iteration of the United Nations Conference on Climate Change. The COPs.

Over a quarter-of-a-century of work.

I am at the end of my own three-year journey in this process.

So I'm going to be frank.

I think we do have to question whether all our current international institutions have fully internalised the grave urgency of our climate situation.

And whether we are truly capable of delivering net zero, by the middle of this century.

So, is one of our fundamental drawbacks that we are coming up against the limits of our existing structures?

Now Prime Minister Mia Mottley, of Barbados, who is one of the world's most powerful climate voices,

and whose country is very much on the frontline of this crisis, set out her views on this particular question at the United Nations General Assembly last month.

Her "Bridgetown Agenda" is a compelling call for an overhaul of our global

financial architecture.

And actually I agree with much of what she has set out.

Institutions, like the World Bank, as admirable as their founding intentions are, were not set up with the purpose of tackling an existential climate crisis.

Today, climate must be at the heart of everything that we do.

The world cannot afford for such institutions to be cautious in how their considerable resources are deployed to tackle the climate crisis.

That, I think, is a matter of social justice as well as environmental security.

And yes, we also have to talk seriously about dealing with the debt crisis, in order to effectively tackle the climate crisis.

As a climate friend said to me last week, the road to an ambitious outcome in Sharm-el-Sheikh, and indeed to all forthcoming COPs, will pass through this city, it will pass through Washington.

And I know the sentiment of Prime Minister Mottley's agenda commands much support.

Secretary Yellen has also spoken, incredibly powerfully, on the issue of MDB reform last week.

I was at Chatham House in London a couple of weeks ago, with some of the world's biggest businesses, discussing the course to a 1.5-degree world.

And they too were talking about the world order being ripe for a "Bretton Woods II" moment.

So friends, the world is recognising that we cannot tackle the defining challenge of this century, with institutions that were defined by the last.

We have to incentivise every aspect of the international system to recognise the systemic risk of climate change, and to make managing it effectively a central task.

Whether that's multilateral development banks or the private sector.

Central banks or investment banks.

Regulators or credit rating agencies.

Finance ministries or philanthropies.

There is frankly no logical reason why every single one of those institutions should not be adapting, to making tackling the climate crisis a fundamental part of their overall purpose.

And ultimately, this is going to be absolutely critical to our efforts to deliver public, private and multilateral finance, including concessional finance, which is so vitally important, at magnitudes that are far, far greater than we are currently achieving, and which we frankly need.

It will be critical to ensuring the multilateral development banks and the international financial institutions in particular show a willingness to innovate, and to stretch their balance sheets.

The G20's Capital Adequacy Review suggests ways in which they can do that, and many of us are expecting an ambitious response to that review.

And it's all going to be critical to ensuring the major philanthropies ramp up their contributions, particularly in areas of higher risk or lower return.

Now of course, whilst finance is absolutely central, our political institutions, whether that is the COP process, the G7, the G20, the G77, they also all have a role to play.

This is particularly true as we look for a genuinely effective multilateral approach to carbon pricing.

Right now, credible estimates suggest less than four percent of global emissions are currently covered by a direct carbon price at, or indeed above, the level we would need to limit warming to 2 degrees or less.

So that point, addressing one of the great market challenges of our time, is of course of particular importance.

So friends, this programme of work is the only way we will fully deliver on the promises made in Glasgow, and in Paris before that.

And yes, absolutely it is an overwhelming agenda of work.

But it is commensurate with both the scale of the challenge, and the scale of the environmental and economic opportunity.

And, as I reflect on the legacy of COP26, and the UK's Presidency, I know that the world can rise to the challenge.

Now of course, it will soon be time for our friends in Egypt to pick up the baton.

COP is a process, and I want COP27 to build on the success of COP26, just as COP26 built on COP25, and COP24 before that.

And yes there is much work to be done.

At COP27, there will need to be serious conversations on mitigation.

Yes, we have seen 24 new or enhanced Nationally Determined Contributions this year, including from the UK.

But that is not enough.

All Parties agreed in Glasgow to step forward on this issue by the end of this year.

And as climate impacts spiral, loss and damage will of course again be increasingly part of the conversation.

A conversation that should go even further than our collective progress at COP26.

And there should be a new agenda item to consider how best to improve the global response, through funding and wider support, aligned with the Glasgow Dialogue.

And countries must get access to the technical help they need through fully operationalising the Santiago Network.

And we must also continue to set out precisely how the billions are going to be turned into the trillions, to go into climate-resilient infrastructure and to support a clean energy transition across the world.

And so we will continue to press on with our Just Energy Transition Partnerships, the first of which, for South Africa, we launched at COP26.

Now each of those partnerships will take on a different, country-specific shape, but they are, and will remain, a key legacy of COP26.

So, with this work ahead, I hope all Parties come to Egypt with the same spirit of urgency, of collaboration and indeed compromise, that underpinned our success in Glasgow.

I will be there as the UK's negotiating minister.

And I can tell you that we will certainly be stepping forward.

So with that, friends, as we look ahead to COP27, and I look to the end of my COP Presidency, I want to end on a hopeful note.

The last three years have been a unique privilege.

I have been inspired by the urgency and the ambition I have felt in rooms like this one, around the world.

And I am certain that, if we can align all of the work that I have seen and that I have talked about today, and adapt the systems that underpin it, the 21st century will not just be the century we pulled the world back from the precipice of climate catastrophe, it will be the century we unlocked a just and sustainable path to prosperity for billions of people around the world.

Frankly what greater motivation could we need?

Thank you.

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